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ABSTRACT

A study of effective strategies for professional development of teachers of limited-English-proficient (LEP) students in the Boston and Cambridge, Massachusetts public schools took a functional-collaborative research approach, involving teachers and administrators in examining the study's issues and conclusions. An early survey revealed that teachers desired training to improve the transition process for students moving from native language to English-language instruction, and the study focused on developing techniques for this purpose. A comparison of native-language, English-as-a-second-language, and standard English programs suggested that the transition process is made more difficult by discontinuities in teaching strategies and language skill sequences in and across all program types, and that more careful coordination of instructional chains and sequences across programs would improve both transitioning and interprogram communication. Because of the study's functional-collaborative structure, increased coordination and communication was an immediate result of the research, and this research strategy is recommended for future research efforts in education. (MSE)

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FINAL REPORT

BILINGUAL INSERVICE TEACHER

EDUCATION RESEARCH PROGRAM

REP NIE R-80-003

A FUNCTIONAL-COLLABORATIVE APPROACH FOR THE IDENTIFICATION OF TEACHING STRATEGIES FOR STAFF DEVELOPMENT OF TEACHERS OF LIMITED ENGLISH PROFICIENCY STUDENTS

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I. INTRODUCTION

Traditionally, educational research has had a hierarchical structure. In the research pyramid, the researcher is assumed to be the possessor of superior knowledge and is therefore responsible for decisions on critical issues for research as well as methodology and dissemination of results. The hierarchy imposes a distance between researcher and teachers and establishes a relationship such as that seen between superior and subordinates. There is little notion of interdependence and not much real shared power, leadership, or control. This leads to a "teacher deficit" approach to research, where the teacher is viewed as lacking the expertise to be directly involved in the formulation of initial research questions or the process of research design. Teachers are thus passive receptors. They provide their classrooms for the context of the research but remain outsiders in the process. Yet, ultimately, they are prevailed on to implement the "model" that results from the research in which they have had little or no input. It is little wonder, then, that the educational models that have been developed by researchers have rarely been implemented successfully in the schools. A recent Rand study clearly stated that programs based on theoretical research, with little teacher input, had a poor rate of success in being implemented. On the other hand, Rand found that where teachers had been involved in programmatic changes, the success rate was higher. Thus, involvement of teachers was seen to be a key element in the success of program innovations.

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This involvement of teachers that appears critical to educational innovation can be generated into the research process by a change in emphasis, a shift from the traditional hierarchical approach to a functional-collaborative one. This approach would have as key elements: a horizontal rather than hierarchical interaction between researcher and teachers, less focus on roles and more on functions, shared power and responsibility, ongoing feedback, and greater involvement in decision-making by program implementors.

This final report will seek to document the functional-collaborative process in the development of a bilingual teacher inservice model for instruction of Limited English Proficiency students. The following questions will be addressed:

1. What are the current educational practices in providing bilingual education for Limited English Proficiency (LEP) students in the Boston and Cambridge school systems?
2. What do teachers, administrators, and district educational advisory committees report as the critical issues to be researched in order to provide successful programs for these LEP students?
3. How was the collaborative process implemented to identify critical research questions?
4. How was data gathered to answer the research questions?
5. What are the conclusions that can be drawn from the research data?
6. What are the implications for research practice and policy?

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II. DESCRIPTION OF THE SITE

This study was conducted in two major school districts in the state of Massachusetts, Boston and Cambridge. The Boston school district serves one third of the Massachusetts bilingual population. Ten thousand limited-English-speakers are served in transitional bilingual programs. Approximately half of the bilingual population is Spanish-speaking. There are also the following language groups: French, Chinese, Greek, Haitian, Italian, Portuguese, and Vietnamese. The Cambridge school district has 594 Limited English Proficiency students in Grades K-8. Bilingual programs are provided for five different language groups: Greek, Portuguese, Haitian, Chinese, and Spanish. More than 55% of the district's bilingual population are Portuguese-speakers.

III. CURRENT EDUCATIONAL PRACTICE REGARDING MINORITIES

The single major influence on the Boston and Cambridge school districts in the last ten years has been court-ordered desegregation. Boston has complied with the desegregation order in three ways: first, by busing children from various communities to schools that have previously been homogeneous as to socioeconomic level; second, by creating bilingual programs in schools that have traditionally had a monolingual program and staff; and finally, by reassigning school personnel.

The integration of children from varying socioeconomic levels and cultural backgrounds, programmatic changes, and new staff assignments have

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created much turmoil in the school communities. There have been numerous cited instances of overt and visible alienation between staff and students. This has been especially noted in bilingual programs that have been established in previously monolingual schools. The Director of Bilingual Education noted that bilingual teachers felt alienated in these schools. He stated that there was little or no communication between bilingual and monolingual teachers.

In February 1979, Cambridge was cited for noncompliance, in violation of Title VI of the Civil Rights Act of 1964, for failing to provide equal educational opportunity for children of limited English-speaking ability. As a result, Cambridge undertook steps similar to those in Boston to comply to federal regulations. While Cambridge implemented bilingual programs whenever possible in cultural communities, the diversity of language groups and the mandates of desegregation caused them to be faced with busing students and reassigning personnel. Interviews with school directors in the Cambridge district who received bilingual programs were once again permeated with statements referring to the alienation on the part of staff and the lack of communication and articulation between bilingual and regular English programs.

This lack of communication between staff and programs is particularly noteworthy due to the nature of bilingual education in Boston and Cambridge. In general, bilingual programs in these districts are transitional in their emphasis and regard the learning of English as the ultimate goal. Little emphasis is placed on language maintenance. The Massachusetts Transitional Educational Law (1971) reads:

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> Every school age child of limited English ability not enrolled in existing private school systems shall be enrolled and participate in a Transitional Bilingual Education Program for a period of three years or until such time that he/she achieves a level of English language that will enable him/her to perform successfully in classes where instruction is given only in English.

Transitional bilingual programs put emphasis on the native language only for initial concept development. The objective of these programs is to teach English and eliminate native language usage by Grade 3.

After three years in the bilingual program, children are usually transitioned into the mainstream, or regular English curriculum. The process of how children are prepared to be mainstreamed from bilingual programs has not been addressed in either the Boston or Cambridge school district. There are no specific transition criteria regarding academic goals or English skill proficiency. This often results in the transitioning of children who lack the academic or social skills to be successful in standard English classrooms. This fact has been clearly noted in the Cambridge schools, where over 60% of transitioned students were not functioning at grade level in English. A large percentage of these children had to return to bilingual programs because of poor academic or social adjustment to the totally English mainstream.

A teacher needs survey was taken in the Boston and Cambridge school districts for the 1979-80 school year. Over 90% of the teachers in Cambridge responded to this survey. One of the most pressing concerns of teachers was the need to establish transition criteria, including articulation of educational goals, along with open lines of communication between programs. 95% of the teachers in Boston gave first priority to these same issues

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These need surveys, along with the failures resulting from current educational practices, indicate the need for a staff development process that will lead to more successful implementation of transitional bilingual education programs in the Boston and Cambridge School Districts.

IV. METHODS

A. SITE SELECTION

The basic underlying interest of this study revolved around staff development in relation to transitioning students from native language to English language programming. The study design called for a selection of schools that represented a diversity of language groups. Schools were also selected with respect to their interest in staff development activity.

Two elementary schools were selected as sites for the study. The Harrington School, which was chosen as the Cambridge site (K-8), is located in a Portuguese community. The school has a Portuguese and Haitian bilingual program. Haitian children are bused to the school. The school's bilingual program is focused on transitioning children into English programs by the third grade. The director of the school asked that the school be included in the study. He stated that staff development programs previously conducted at the school had a low success rate. He said that teachers from native language, English-as-a-Second-Language, and standard English programs were openly hostile to one another. The need for staff development in the area of transitioning students was recognized recently, when forty children who were transitioned to the third-grade English program could not function successfully and had to return to native language programs. This failure occurred despite the fact that these children had

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received English-as-a-Second-Language instruction for three years. The school director stated that he would personally do everything he could to facilitate the research project.

The Mattahunt School in Boston, which was also chosen for this study, provides a bilingual transitional program for Chinese- and Spanish-speakers in Grades K-5. Students are bused to the school. The Mattahunt School utilized a loosely defined leveling method for transitioning students. There was no definite transition criteria. Teachers at this school expressed an interest in the research project at a staff meeting. The school director reiterated the need for a teacher inservice program that would address the issue of transitioning students.

The two schools participating in the study had the following variables:

- Bilingual, native language, ESL, and standard English classroom teachers
- Grade levels from Kindergarten to Grade 8
- Diverse non-English linguistic groups (Boston - Spanish, Chinese; Cambridge - Portuguese, Haitian)
- Differential staffing
- Various teaching methodologies
- Diverse grouping and curricula
- Broad range of school organization and management
- Transitional bilingual programs

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B. COLLABORATIVE APPROACH

Collaboration as a process has at its core cooperative behavior, interdependence, and a nonhierarchical structure. Interdependence includes joint decision-making and agreed upon authority and responsibility. A nonhierarchical structure means that power is shared between individuals and is based on knowledge or expertise rather than on role function. There is a meeting of boundaries between roles and a pattern of interaction dependent on a negotiated order between individuals, groups, and the larger context in which people work.

Collaboration is guided by group commitment to agreed upon goals. Mutually exclusive objectives are replaced by interlocking objectives. This means each person depends on others to some extent for goal attainment. Deutsch (1973) states that mutual dependency and interlinking objectives have a positive correlation with the attainment of goals.

In this project, the collaboration process was used to develop a bilingual teacher inservice model. The process as it was implemented at the school sites stressed interdependence between the research team and school personnel. Goal setting for the project outcomes was a joint process. The structure of goal attainment was determined by the teachers, who were recognized as the ultimate implementors of outcomes. The principal investigator served as collaborator, guide, mentor, negotiator, and synthesizer. The term "collabormentor" was coined to depict the principal investigator's role as a colleague in research rather than as an authority figure who would direct the project toward pre-established goals.

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The primary responsibility of the research team was to bring school personnel into a responsive condition for collaboration by establishing and later reinforcing collegial relations between diverse staff members. The stage was first set for collaboration by conducting individual interviews with school personnel involved in the project. During these interviews, individual objectives for the research project were acknowledged. Later, at a group meeting, the research team reported individual objectives and manifested how they could be linked together as complementary elements in establishing group goals.

This approach gave credence to the importance of individual objectives but also established from the beginning the awareness that in order to achieve these objectives, staff personnel must interact with the larger system or educational community. Thus, a major role of the research team in the collaborative effort was to interlink and synthesize objectives and mobilize the cooperation of school personnel toward goals of mutual benefit. Cooperation was the value stressed as being consistent with the collaborative process. This cooperation involved a meeting of boundaries between individual objectives so that they they were integrated as part of the overall goal of transitioning children successfully. The key collaborative processes that were implemented as school sites included:

1. Establishment of Goals and Orientation to Decision-making
2. Reciprocity between Internal Social Stability and External Value-sharing
3. Teacher Ownership of Outcomes as Implementors
4. Interdependence - Open Communication and Patterned Interactive Teams

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5. Task Orientation - Functional Role-taking

6. Support Systems - Continual Feedback by Pairing of Principal Investigator with One Key Staff Member at Each School

7. Tangible Outcome - Product of Practical Relevance

8. Implementation by Teachers as Principal Agents of Change

Each of these collaborative processes were integrated to answer the research question that was of foremost importance to all school personnel: How can children be more successfully transitioned from native language to standard English programming?

Implementation of key collaborative processes at school sites:

1. Establishment of Goals and Orientation to Decision-making

Initially, the two school school district sites, Boston and Cambridge, were involved in the establishment of goals for the research project. The first meeting involved school personnel from both sites, including bilingual (native language) teachers, English-as-a-Second-Language teachers, standard classroom teachers, school principals, classroom aides, district curriculum specialists, bilingual staff coordinators, and directors of bilingual education. This "total involvement" established the collaborative frame of reference that would be used throughout the project. It was believed that any educational change that resulted from the project would be better accepted and implemented if all school personnel had involvement and commitment to project goals. This approach also served to integrate rather than to segregate bilingual staff from the larger or collective school community. Interaction of bilingual with other school personnel

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was noted to be especially important in school districts that are mandated by law to implement a transitional bilingual program. The goal of bilingual education is to prepare children to be mainstreamed into standard English programming. Children's success in the mainstream was noted to be directly related to how well program goals coincided, especially in terms of teaching strategies and skill sequences.

During the first collective meeting, the principal investigator identified key issues in bilingual education and discussed the goal of developing a bilingual teacher inservice model for teachers as implementors of bilingual programming. The collaborative process was clearly defined as the most effective method for arriving at a model that would be of practical benefit to teachers. It was noted that the process of collaboration would serve the ultimate purpose of establishing communication between programs, resulting in more successful transitioning of students.

At the initial meeting, participative decision-making was also stressed, along with shared power and responsibility between research team and school personnel. It was stated that through the process of collaboration, researchers and staff would decide collectively on the direction and design of the research. School personnel were invited to state perceived needs of bilingual programs as part of the total school organization. Again it was emphasized that the bilingual program was not an entity in and of itself but a part of the total school organization. School personnel were requested to complete a needs survey at this meeting (see Appendix).

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2. Reciprocity between Internal Social Stability and External Value-sharing

The second stage in the collaborative process consisted of individual interviews with school personnel, including advisory committee members, conducted by the research team. The purpose of these meetings was to recognize personal needs, to clarify individuals' real and espoused values, and to provide nurturing for individual perspectives. The reason for nurturing is based on the premise that individuals have almost unlimited potential to respond to change in the total school context. In order for this potential to be realized, support must be given for the feelings held by individuals. Once individuals feel recognized as important contributors to the total school organization, an internal social stability is established. This means that individuals begin to feel like insiders and not outsiders to the change process. They feel they are in control. Therefore, school personnel were reinforced for expressing their feelings and ideas. An effort was made to help teachers distinguish between real and espoused values. Teachers were confronted when a discrepancy existed between espoused values and actual behavior. When confronted, teachers often openly admitted that while they believed in cooperation and mutual interdependence, they rarely interacted with other staff members in actuality. Bilingual and standard English teachers each expressed a feeling of alienation. Bilingual teachers stated that they were not considered an integral part of the school community. They said that bilingual programs were segregated from the total school program. Standard English and English-

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as-a-Second-Language teachers stated that they often felt threatened by bilingual teachers. The school principal expressed a sense of frustration in trying to get total staff cooperation. The principal at the Cambridge site noted that bilingual and regular English classroom teachers had not interacted in his twelve years as director of the school (see Appendix for letter written after the study). Parent advisory committee members reported the poor success rate of students who achieved in native language classrooms but could not adjust academically or socially when they were transitioned to standard English classrooms.

School personnel noted that there was a lack of social and academic reciprocity between school programs. While bilingual and regular classroom teachers prided themselves on "collegial" relationships within their respective groups, they acknowledged that there was no intergroup communication. Members of each group stated that it was the other group who was responsible for this lack of interaction. Implicit in the expression of values by each was group was a belief in the superiority of that group's programmatic goals. Bilingual, English-as-a-Second-Language, and standard English classroom teachers acknowledged the fact that children were not being transitioned successfully from native language to English programming. Bilingual teachers expressed the fact that they had little or no information about programs into which they were transitioning students. Standard English language classroom teachers expressed a sense of frustration in working with students who often were not adjusting well socially or academically. Teachers were especially concerned

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when students who had done exceedingly well in native language programs did not continue to achieve in mainstream English programs.

The research team tried to provide nurturing for the feelings of individuals. Nurturing has as its basis a sense of caring. The research team members expressed concern for each person as an individual and for the perspectives that were important to him or her. An emphasis was placed on continued development of feelings, attitudes, and values. Each interview between a member of the research team and a school staff member closed with a restatement of personal needs and an expression of the need for open communication and sharing between programs, thus laying the foundation for collaboration.

After the individual interviews, the research team listed all needs expressed by school personnel. Second meetings were held separately for bilingual, regular English, and ESL teachers. It was thought that in this way teachers would have more freedom to comment on needs expressed across programs. General areas of concern expressed across surveys and interviews were outlined. These were the need for:

- effective teaching strategies in cognitive, affective, and social areas;
- transition criteria;
- entry-exit chicklist to be shared across programs;
- child-centered rather program-centered objectives.

An effort was made to engage the group in problem-solving from a multi-perspective framework.

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The third meeting included both bilingual and standard classroom teachers as well as other school personnel who had chosen to participate in the project. The goal of this meeting was to establish a common or mutual goal and to initiate external value-sharing through the process of collaboration. Goals common to both groups were stressed. Mutual interests were highlighted. Individual and program needs were noted to be similar more often than different. The process of collaboration was reinforced as a method of fostering individual growth and linking people together by overriding individual differences.

External value-sharing was encouraged by having members of each group discuss common interlinking objectives of programs in terms of how to address the goal of successful transition effectively.

The research team encouraged teachers to respond to each other's questions on programmatic goals. A child-centered rather than a program-centered frame of reference was established. By the adoption of a child-centered approach, teachers were encouraged to state objectives from a unified perspective. Objectives from both groups were given consideration in relation to how they suggested goals that were dependent and in fact influenced by the other group. In seeking to answer the question of how children can be successfully transitioned, teachers were encouraged to provide each other with information on teaching strategies as well as academic and social programmatic goals. The focus in stating programmatic goals was on problem finding and solving rather than on placing blame for the overall lack of success in transitioning students.

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At this meeting, teachers decided collectively that the goals of the research project should be:

1. To clearly delineate language teaching strategies used in bilingual, English-as-a-Second-Language, and standard English classrooms;
2. To develop an entry-exit language skill checklist that would cut across programs.

School advisory committee members and other school personnel reinforced the need for the research to be directed toward these goals. They suggested that in addition to cognitive language teaching strategies, affective and social strategies should be considered. The bilingual curriculum specialists expressed a concern for identifying teaching strategies that would link programs. English-as-a-Second-Language classes were noted to be important in bridging native language and mainstream English programs.

3. Teacher Ownership of Outcomes as Implementors

The explicit purpose of the fourth meeting was to formally establish teachers' ownership of the research problem both as collaborators in research and as implementors of outcomes. Teachers were recognized at this meeting as the implementors of research outcomes. It was therefore explicitly stated by the research team that teachers should have the most influence and control over the design of the research and expected outcomes. Teachers were therefore solicited to work with the research team in developing a research design that would conform to the goals set forth at the previous meeting. This close collaboration between teachers and researchers

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was noted by school personnel to be the factor that contributed most to the success of the project. A critical component of this collaboration in regard to outcomes is that individuals gain greater mastery over tasks and more skill and knowledge of processes when they have some influence over design and implementation. Teachers who have input in determining the goals of research and the methods of attaining the goals will be more likely to implement the results. Through the process of collaboration, teachers have a feeling of internal control over the organizational environment. This results in increased commitment, involvement, and investment in task outcomes. Thus, project goals have a higher probability of being implemented. The success rate is significantly higher than for cases in which research goals are determined solely by outside researchers.

4. Interdependence - Open Communication and Patterned Interactive Teams

School personnel were divided into "patterned interactive teams." These were five teams of six people at each school site. Members of teams were grouped by interests, skills, knowledge, abilities, grade levels, and roles. A typical interactive team was composed of two bilingual teachers; a standard English classroom teacher; an English-as-a-Second-Language teacher; a research team member; and an administrator, curriculum specialist, or school advisory group member. These teams were termed "patterned" because an effort was made to include a cross section of members. The teams were interactive to the extent that they functioned as units concerned with a common functional goal. The tasks of the groups were to delineate teaching strategies in the cognitive, affective, and social areas of language

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and to list teaching methods and types of teacher feedback to students. The strategies, methods, and feedback were to be based on observable teaching behaviors. To accomplish this task, groups met on a weekly basis for ten weeks.

The focus on functions or tasks caused emphasis to shift from bilingual vs. English classroom programs to strategies that were common to both programs. Permeable boundaries between programs gradually came to be acknowledged by group members. The focus on functional interdependence of overall goals continued to increase. There was also noted to be a greater emphasis on "we"-ness than on "they"-ness. Movement of individual members across groups was encouraged. Perceptions that group members had of each other began to change. As the boundaries between programs were crossed by mutual goals, competition between individuals and programs decreased and the need to segregate programs in order to maintain identity was reduced. There was less need for individuals to be concerned with a consolidation of resources. Groups interchanged ideas. There was a continual ongoing process of feedback, evaluation, and modification. Emphasis was placed on identifying teaching strategies common to both programs. Integration of ideas and interdependence of group members was noted. In fact, the group tasks became secondary to the process of collaboration itself. School personnel began to interact on an interpersonal level. Trusting, friendly attitudes with a positive interest in the others' welfare and a readiness to respond to the others' needs and requests were by-products of the collaborative effort.

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It appeared that collaborative goal structures encouraged positive interpersonal relationships characterized by mutual liking, positive attitudes toward the other, and feelings of obligation to consider the other's point to view. This supports the evidence that even when individuals come from groups with high levels of conflict, cooperation in achieving mutually desired goals produces positive intergroup and interpersonal relationships (Sherif, 1961; Lewicki, 1969). This in turn leads to more successful goal attainment.

5. Task Orientation - Functional Role-taking

A collaboration process starts with the nature of the task and builds structures around it rather than starting with a predefined structure and force-fitting the task to it. Therefore, the interactive teams' task of identifying teaching strategies, methods, and feedback gradually evolved into the construction of a classroom observation instrument. The instrument was not designed by the research team and imposed on teachers; it was the result of the collaborative process. The construction of the observation instrument enabled teachers and other school personnel to practice skills directly related to educational research. Teachers themselves defined behavioral objectives in cognitive, affective, and social areas of language. The purpose of defining objectives, methods, and feedback was to mirror specific classroom practices that occurred in the context teacher-student interaction across subject areas.

Another critical feature of the collaborative process was the focus on function rather than role. A negotiated order resulted

which was not hierarchical, with researchers taking the dominant role, but was based on expertise related to particular tasks in organizing the research design. Thus, while teachers' expertise in delineating instructional objectives was acknowledged, the researchers' expertise in organizing the information into a practical research instrument was equally accepted. During the planning stage for the development of the instrument, the research team articulated that normal hierarchical processes would be abandoned and would be replaced by the principle that each task should be completed by the most expert person, regardless of position.

There was a continual exchange of ideas. Roles were constantly changing as tasks called for different expertise. Decisions on what was to be included in the instrument were made by all persons, with consensus as the goal. All members of the group had equal power.

This functional approach is significantly different from the hierarchical approach of most research models, where the researcher determines the nature and the outcomes of the research design. There, researcher's role is elevated above that of teachers or others who are directly involved in the research. Directives are issued according to a hierarchical model; there is no participative decision-making.

The functional approach to research employed in the process of collaboration focuses less on roles and more on functions or tasks. These tasks rather than the hierarchy of roles become the impetus for collaboration. Tasks need to have diversity, creativity, and fluidity built into them. Functional role-taking fosters a high

degree of work-oriented behavior and maximizes productivity.

Two of the most important processes in the functional approach are problem-solving and communication/information flow. Conflict resolution is based on cooperative problem-solving methodologies. Thus, when there was a difference of opinion regarding the objectives to be included in the observation scale, group members collectively reviewed the inclusion or omission of items.

The communication or information flow is horizontal rather than vertical. This means that there are no top-down issued mandates. Everyone has equal power. Power is replaced in many instances with group preferences.

The result of the functional task-oriented approach was the LIN-VEN Language Observation Scale. Teacher-defined objectives were noted by researchers to be implemented in classrooms as instructional chains. Each of the elements of possible instructional chains was discussed and agreed upon. Coding sheets were collectively designed. The research team then focused on how chains could be analyzed. Teachers decided that the research team should initially observe all programs, coding strategies. Later, teachers would be taught to code on the instrument and observe each other. The purpose of using the language observation scale was to document the areas of language where instruction was concentrated in each of three programs: native language, English-as-a-Second-Language, and standard English classrooms. The ultimate outcome would be to utilize the results to coordinate instruction between programs. Earlier, it had been collectively determined that children must develop expertise in all

three areas of language (cognitive, affective, and social) to be successfully mainstreamed and that these language skills should be developed across languages and programs.

6. Support Systems - Continual Feedback by Pairing of Principal Investigator with One Key Staff Member at Each School

As interactive teams engaged in problem finding and solving, the process of continued feedback became very important. The feedback system in the process of collaboration seeks to match rewards with the degree of interdependence inherent in the task. Interpersonal feedback occurs when team members see themselves as resources to one another in achieving goals of mutual benefit.

The research team, however, built feedback into the collaborative process by building in devices to recognize and support interdependence between interactive team members as well as teams. Based on the behavioral axiom that rewards should closely follow the behavior they reward, verbal praise was given immediately to those team members who sought to involve their fellows in decision-making. Written notes followed verbal feedback. The director of the school was also intimately involved in the feedback process. He scheduled conferences with individual team members to compliment them on their collaboration. The principal began every staff meeting by thanking teachers for participating in the research project and noting the value the ultimate outcome was going to have on the total school organization as well as on the lives of individual students.

The superintendent also gave positive feedback to teachers by periodically attending meetings and by writing positive memorandums.

Positive parental feedback was gained at school board meetings when the collaborative process and the goals of the research project were discussed.

Monthly social meetings, including coffees and potlucks, were planned by the research team to encourage positive social interaction among staff members.

The most significant feedback for the collaborative process occurred as staff members began to interact in staff rooms and after school by sharing techniques, ideas, and information about students relevant to instructional planning.

The second part of the feedback process was the pairing of the principal investigator with one influential, respected school staff member. The school staff member became the on-site coordinator of of the project. Being on-site gave the added advantage of being able to organize the project from the inside.

The interaction of an outsider (principal investigator) and the insider (school site manager) proved to be a highly significant element in the overall collaborative research design. Whereas the principal investigator could bring an objectivity to the identification of school needs, the key school person brought the subjectivity of knowing the interworkings of the system from an inside perspective. Weekly meetings between the principal investigator and the school site manager maintained a successful working balance between the input of outside researchers and that of inside staff members on an ongoing basis. The support of this influential staff member proved to be invaluable in determining the direction of the research project at

various intervals. The site manager also gave continual feedback to teachers, maintaining the high level of enthusiasm for the project. Finally, the site manager served as the coordinator of school meetings and disseminator of information to school staff and to the school as a whole.

7. Tangible Outcome - Product of Practical Relevance

The school staff and research team agreed at the end of the project that the development of a product of mutual benefit was crucial to the success of the collaborative process. Collegial relations were established as teachers shared their knowledge and expertise and saw the results of their efforts in the concrete form of an observation scale. This statement adheres to the findings of Chapin (1957) and Deutsch (1960). These researchers found that cooperative groups engaged in developing a product requiring collaborative activity were found to have greater coordination of effort, greater attentiveness to other group members, orientation to the goal, and continued cooperative relationships.

The teaching observation scale was the first successful cooperative endeavor of teachers who had not interacted in fifteen years. The success of this collaborative effort was the impetus for a second collaborative effort, which was to have a major impact on school programming and curricula.

The second collaborative effort was the development of grade level entry-exit language checklists (K-1, 2-3, 4-5). Teachers from the three programs (native language, English-as-a-Second-Language, and standard English classrooms) developed the entry-exit language

checklists with the research team. These checklists had a continuum of skills in each of the following language areas: receptive, expressive, functional, social, affective, reading, and writing (see Appendix). The skills were sequenced according to developmental acquisition. Research team members collaborated with teachers in developing test items for each skill.

The development of this checklist caused changes not only in programmatic goals and the grouping of children but in working collegial relationships between teachers. This fall (1981), teachers tested all incoming kindergarten and first-grade children on the continuum/entry-exit checklist, both in native language and in English, not only in the project school but throughout the district. Children are grouped according to the results of the testing. Teachers from all three programs (native language, English-as-a-Second-Language, and standard English classrooms) are meeting weekly to collaborate on ideas for teaching language skills. All three groups, however, are teaching the same skills whether in native language or English. Teaching strategies that were researched on the observation scale are tied to activities.

The entry-exit checklists are currently serving as criteria for transitioning children from native language to English classrooms. Children enter school with a diversity of language skills. However, children must master a percentage of language skills in all language areas to be transitioned. Teachers now have an instrument on which to base their collaboration and instructional strategies and can plan together to establish a continuity of teaching methods and

skills across programs. This results in teachers' not duplicating their efforts. The checklist of skills is passed from teacher to teacher. The first-grade teacher thus continues instruction in language skills that the child did not master in kindergarten.

The Entry-Exit Language Skill Checklist and the LIN-VEN Observation Scale, developed through collaborative efforts of teachers and researchers, have had a major impact on the school districts involved in the research. The director of the Cambridge district reported the following to the school board in November, 1981:

> The collaborative effort of the bilingual teacher research project has had two important outcomes: First, and most significant, it has resulted in collegial relationships across programs. Secondly, the teaching observation scale and Entry-Exit Checklist have directly caused major programmatic changes which have already been noted to be of positive benefit to children.

In summary, it may be stated that the collaborative effort of teachers working as researchers along with a research team achieved the project goal of developing transition criteria. Through the process of collaboration with researchers, teachers developed two important instruments. The development of these tools, however, was not a theoretical endeavor that had no practical implications, as is often seen in research. Contrarily, teachers highly involved and committed as researchers have transferred this enthusiasm as implementors of the research outcomes, acting as change agents. This has resulted in positive changes in collegial relationships as well as in curricular innovations that are of direct benefit to students.

STAGES OF COLLABORATION - SUMMARY

STAGE ONE

Orientation - Set Overall Goals

Research team, teachers, other school personnel, including school advisory team members, clarify and initially identify research goals. Meet with total school staff. Distribute written needs survey to total group.

STAGE TWO

Establish Internal Stability - Individual Nurturing

Conduct individual interviews with each staff member. Interviews should be semistructured and designed to give nurturing and provide acceptance for individual needs, considering real and espoused values. Conclude each interview with the introduction of the idea of common value-sharing.

STAGE THREE

Establish Internal Stability - Group

Conduct separate meetings for diverse groups (ex.: native language, ESL, standard English). Clarify research problem from group perspective.

Establish internal stability between group members by discussing programmatic objectives. Extend this to common external value-sharing by alluding to total school organizational goals.

STAGE FOUR

External Value-sharing - Teacher Ownership of Outcomes as Implementors

Total staff meeting including all diverse program groups (native language, ESL, standard English). Discuss collaborative approach and orientation to decision-making. Focus on similarities of needs across programs. Establish external value-sharing and common goals. Put the greatest emphasis on teachers' setting research goals as implementors of outcomes.

STAGE FIVE

Interdependence - Open Communication and Patterned Interactive Teams

Group school personnel in teams of five or six people. People should be grouped by skill, interest, and program affiliation. Groups should have diverse members and

represent all programs. Maintain flexibility and fluidity between groups, allowing group members to change groups as appropriate to research outcomes.

STAGE SIX

Task Orientation - Functional Roles

Clarify and define group tasks. Develop a functional approach to role-taking according to knowledge and expertise rather than status. (Develop research instrument. Ex.: LIN-VEN Scale of Language Use.)

STAGE SEVEN

Support Systems - Continual Feedback

Design support systems for teachers to gain continued feedback, especially feedback immediately following behavior. Pair principal investigator with influential school employee at each site. Arrange for continual information flow between outsider and insider.

STAGE EIGHT

On-site Research Occurs

On-site research occurs with use of instrument developed collaboratively by teachers and research team.

Analysis of data.

STAGE NINE

Development of Product

Development of product based on research results. The product should have practical relevance to the school as a whole. The product's use should encourage and reinforce further use of the collaborative process (ex.: entry-exit checklist/continuum).

STAGE TEN

Implementation of Product

Teachers, as implementors and change agents, integrate products in their instructional approach.

STAGE ELEVEN

Evaluation of Product and Process - Design Inservice Model

Inservice model should include steps in collaboration as well as specific uses of product as it affects positive programmatic changes.

C. RESEARCH DESIGN AND INSTRUMENTATION

The design of this study is a repeated measures analysis of variance (ANOVA) design. Classrooms constitute the units of analysis. Between-unit factors include school sites (Boston and Cambridge) and language composition of classrooms. In addition to standard English classrooms, English-as-a-Second-Language, Portuguese, Spanish, Haitian, and Chinese classrooms were used in this study. Content areas of instruction (eg., reading, social studies, math) were within-unit factors. The primary dependent variable was the patterned chain that characterizes teacher-student interactions per observation. These patterned chains are broken up in subsequent analysis to determine the relative efficacy of certain segments of the chains (eg., teacher's objectives, teacher's method) in accounting for variance in outcome variables. Frequency of student-initiated interactions with teachers or peers are also measured.

Data was analyzed at Harvard University. The Data-Text statistical analysis package was used on an IBM 360 computer. The Data-Text system is particularly well-suited to analysis requirements, including treatment of unequal cell sizes, its deviation of residuals, and its provision of repeated ANOVA options.

Planned comparisons were employed to test answer-specific questions relating to instructional objectives, methods, feedback and continued teacher-student interaction. Specific questions posed by the research are:

1. How do native language, ESL, and standard English classrooms compare in terms of amount of time spent in each of the language areas (cognitive, affective, and social)?

2. Which programs have more child-initiated interactions?

3. How do primary grades (K-3) in all programs compare with upper grades (4-6)?

4. How do native language programs compare with English programs?

5. What types of teacher feedback result in continued linguistic interaction between teacher and student or student and peers?

Answers to these questions were obtained by correlational analysis. This analysis was performed to manifest differences between programs and language groups. Chi Square analysis was used to examine differences between programs. However, the main goal of this analysis is not significance testing but a measure of what goes on in the classroom.

Instrumentation

The LIN-Ven Scale of Language-Teaching Strategies is an instrument collaboratively developed for systematic observation and analysis of adult-child verbal interactions in classroom settings. The scale focuses on three functional uses of languages: cognitive, affective (personal), and social. The premise on which this instrument is based is that the teacher is the key figure in the classroom, who provides practice opportunities for children to learn language across the three areas. The objectives the teacher formulates to give children opportunities to express themselves are not measured on the instrument as discrete events but as instructional chains of verbal interactions. With respect to verbal communication, the instrument records each interaction in terms of links which make up the instructional chain. These include: Who Initiates, Teacher Objectives, Direction of Flow (to child or to group), Physical Method, Language Method, How Student Uses Language Opportunities,

Feedback from Teacher, and Continued Interaction (see Scale A).

Language learning is highlighted on this instrument by the category which pinpoints how the child takes advantage of language opportunities. Research indicates that practice is crucial to language learning (Seliger, 1977). Practice is defined by Seliger as any verbal interaction between the learner and the teacher or others in the learning environment. Practice occurs when what the teacher does causes the child to respond verbally. Therefore, chains that elicit extended discourse are said to allow more practice to take place. Practice can be measured quantitatively as the number of chains that result in extended discourse. Although the scale focuses on teacher-initiated interactions, a frequency count is also taken of children's initiated interactions, following the belief that children who initiate cause a concomitant input from others and therefore gain more practice opportunities.

Teaching strategies are the focus of the observation scale. It is the teacher who, by giving feedback to the child, either encourages o discourages continued linguistic interaction (practice opportunities). This can be noted in the following examples of instructional chains taken from two classrooms which were part of the research study:

Example 1 - Cognitive Chain

3 Teacher Objective (Cognitive) -

Identifies or labels:

"What is the capitol of Massachusetts?"

2 Direction -

To group

1 Method Physical

Context-oriented (The question was related to the social studies lesson.)

3 Method Language

Questioning

4 How Student Uses Language Opportunities

Identifies or labels:

"Boston."

2 Feedback from Teacher

"Yes."

2 Continued Interaction

Stops

This chain was a common one found across programs. The feedback the teacher gives the student, "Yes," causes the interaction to stop. Feedback such as soliciting more information ("Tell me more about the city of Boston.") would cause the interaction to continue with the concomitant value of giving the child more opportunity to use language.

Example 2 - Affective Chain

15 Teacher Objective (Affective)

Elicits students' free expression of feelings:

"How do you feel about what you did in school today?"

2 Direction

To group

1 Method Physical -

Context-oriented (Discussion of feeling was related to the story.)

3 Method Language

Questioning

17 How Student Uses Language Opportunities

Expresses feelings:

"I had a horrible day in school today!"

16 Feedback from Teacher

Rejects:

"I don't want to hear that."

2 Continued Interaction

Stops

This chain is coded as 15, 2, 1, 4, 17, 16. The teacher's rejection of what the child said ended the verbal interaction and thus failed to encourage increased language production (practice).

In another classroom the chain was 15, 2, 1, 4, 14, 1. The feedback from the teacher was 14, to build on the child's feeling ("Tell me what made you feel badly."). This resulted in continued interaction.

Example 3 - Social Chain

19 Teacher Objective (Social)

Focuses lessons around group interaction:

"We are going to play the 'Bunny Game.' I am going to tell you how to play the game. You draw...."

2 Direction

To group

1 Method Physical

Context-oriented (The game was related to reading lesson.)

6 Method Language

Explaining

24 How Student Uses Language Opportunities

Role-plays

22 Feedback from Teacher

Builds on social dialogue

1 Continued Interaction

The teacher's feedback in this chain continued linguistic interaction by building on social dialogue.

The length of the chain determines the extent of verbal interaction. It is also important to note in which area the interactions are concentrated to determine whether children are receiving practice in all three functional areas. Concentration of linguistic interaction was noted to vary significantly across programs at both school sites. English-as-a-Second-Language (ESL) instruction, in both "pull-out" and bilingual classes, was noted to have virtually no use of affective or personal language. On the other hand, the affective use of language was highly concentrated in native language classrooms, including Portuguese, Spanish, Haitian, and Chinese (see Data Analysis).

With respect to the characteristics of classroom settings, the observation instrument records Class Size, Class Description (native language, ESL, standard English, other), Dominant Language, Level, and Content Area.

The correlation of teachers' verbal communication with students' responses and the learning environment within each time span observed provides a milti-dimensional picture of teacher-student communication patterns.

Validity

The validity of the instrument has been established by the consonance of findings about specific classrooms expressed by educational specialists

serving in a consultant capacity. Moreover, data collected in a variety of settings (over sixty-two classrooms and across four language groups - Portuguese, Spanish, Haitian, and Chinese - using native-language-speakers as coders) proved that the instrument could be used to measure language interactions that proved consistent with teachers' programmatic goals in those situations.

Reliability

Internal consistency: Patterns of communication of teachers in twenty classrooms observed on twelve separate days were generally consistent.

Inter-coder reliability: Correlation of the data collected by pairs of observers in sixty-two classrooms, coding the same communication at the same time, resulted in an overall mean of .986. This means that inter-coder reliability was extremely high. Specific inter-coder reliabilty coefficients for each link in the instructional chain are as follows:

- Language Use - Cognitive/Social/Affective Objectives - 1.0
- Teacher Objective - 1.0
- Teacher Feedback
  - Cognitive - .980
  - Affective - .972
  - Social - 1.0
- Initiator - Child/Teacher - .915
- Physical Method - .944
- Interaction Continued - 1.0
- Direction of Communication Flow (to)
  - Female - .969
  - Male - .956
  - Group - .981

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- Language Method - 1.0

The LIN-VEN Scale of Language Use avoids the extreme complexity of other recently developed instruments. It also records a deeper level of differentiation than the well-known Flanders technique. Since the observation is based on behavioral objectives of teachers that can be observed directly, it permits the coder to record instructional chains without making inferences. Since the scale is not overly complex, it can be coded live, thus avoiding the costly and time-consuming process of taping and transcribing the episodes to be analyzed. However, it can also be used effectively to code verbal interactions form videotapes. This is especially useful in initial training and for giving teachers' feedback.

The instrument provides quantitative data on what is observable during a specified time span - in effect, a "photograph" of the adult-child interaction. The instrument can also be used for summative research (program evaluation) to assess the types of linguistic interactions that are taking place in the classrooms and in what domains they are concentrated.

Language variables that are assessed on the scale were of relevance to teachers across programs. The use of these variables is supported by literature and noted to be important to children's communicative fluency. The scale codes many dimensions of language which were deemed important by teachers as transition criteria yet are not easily measured on tests. For example, productive language in three functional areas is important for transition, yet this language cannot be measured on pencil and paper multiple-choice tests. Systematic observation, on the other hand, can assess such factors by noting how the child responds. The opportunities the teacher gives for student response in each area is also recorded.

In formative research it is important to assess behavior objectively and to restructure the learning environment, if necessary, on the assessment. The LIN-VEN Scale of Language Use enables teachers to identify patterns of verbal instructional chains within their respective classrooms. Teachers in this study were also able to get a firsthand view of verbal patterns in other classrooms by coding teacher-student interactions in those classrooms.

In summary, the LIN-VEN Scale of Language Use can be used as a measure of classroom verbal interdction. Coders can manifest classroom interaction patterns by recording directly observable teacher and student behaviors linked by an instructional chain. In this project, the scale was used to:

1. Record language teaching strategies in various programs in three areas (cognitive, affective, and social);
2. Specify those instructional chains that elicit extended discourse;
3. Sensitize teachers to their own patterns of communication;
4. Differentiate between communication patterns across classrooms and programs;
5. Assess the learning environment, the teacher's objectives, and the children's language behavior in relation to teacher feedback.

The scale can serve to link program objectives through instructional chains, thus making the transition process more continuous for children. The scale was developed through a collaborative effort between teachers and researchers in an attempt to identify and document teaching strategies in native language, English-as-a-Second-Language, and standard English classrooms. The identification of teaching strategies was to serve to unify instructional processes. It was noted that the consistent application

of teaching strategies across programs would greatly facilitate the transition process for children. Thus, children would not waste valuable learning time adjusting to various approaches. A consistently applied program that develops children's first and second language in all three language areas was the ultimate goal. Thus, teachers were given feedback on what they were doing to facilitate language learning for children by providing them with opportunities to use language in cognitive, affective, and social areas.

D. DATA COLLECTION

Classroom observations were coded by paired observers using the LIN-VEN Language Observation Scale. Observers were paired by language group. Native-language-speakers were used to record teacher-student interactions in Portuguese, Spanish, Haitian, and Chinese classrooms. Observers were initially trained to code on the observation scale through the use of videotapes. This initial training was followed by actual classroom visitations for one week. During this period, the principal investigator or the head research assistant coded with other research assistants on the observation scale.

There were twenty-four research assistants, who coded classroom observations in pairs. In a five-month period, these research assistants collectively made over six thousand classroom observations in sixty-two classrooms across school sites. Observations were equally divided between native language, ESL, and standard English classrooms. Five million instructional chains were collected. Classroom visitations were usually fifteen to thirty minutes in length. An effort was made to observe in

classrooms during presentation of different subject areas.

Weekly meetings were held with research assistants. During these meetings, schedules were handed out. Any difficulty in coding was also addressed. In fact, the observation scale was revised twenty times before a final version was used for coding. The revisions of the scale were based on researchers' experience with actual classroom observation and continued staff input. During the initial phase of data collection, the teachers requested that outside researchers code teaching strategies in order to maintain objectivity. However, one of the final phases of the research included teachers' observing and coding each other on videotapes as well as during classroom visits arranged by the school director.

I. LIN-VEN SCALE OF LANGUAGE USE

II. LIN-VEN CODING SHEET

1. Initiates	2. Teacher Objectives	3. Direction To	4. Method Physical	5. Method Language	6. How Student Uses Language Opportunities	7. Feedback From Teacher	8. C I
1. Child 2. Teacher	(A) Cognitive - Simple 1.recall specific info 2.gives facts 3.identifies or labels 4.identifies procedures, directions 5.describes or defines 6.clarifies or categorizes (B) Cognitive - Higher Level 7.comprehension 8.applies rules 9.evaluates & draws conclusions 10.compares & contrasts 11.analyzes 12.synthesizes 13.creates or produces (C) Affective 14.identifies, labels or describes feelings 15.elicits students' free expressions of emotion 16.expresses concern for students' feeling & well-being 17.gives personal message 18.judges behavior (D) Social 19.focuses lessons around group interaction 20.focuses language in formal (social sit. game) 21.focuses language in informal sit. 22.identifies amenities or pleasantries 23.structures activities around social functions of language 24.arranges social group interactions between dominant & second-language learners 25.identifies social roles	1. Female Child 2. Male Child 3. Group	1.context-oriented 2.non-context	1.soliciting info 2.drilling 3.questioning 4.modeling 5.commanding 6.explaining 7.peer prompting 8.code switching 9.role playing 10.socializing 11.bridging 12.chunking 13.translating 14.cueing 15.narrating 16.commenting 17.other	(A) Cognitive 1.non-verbal response 2.states yes/no 3.repetition 4.identify/label 5.gives facts 6.questions 7.elaborates - additional information 8.performs an activity 9.choral response 10.code switching 11.describe or define 12.compares 13.evaluates 14.analyzes 15.synthesizes 16.creates (B) Affective 17.expresses feelings 18.humor 19.gives overt expression of concern 20.complains 21.relates to personal experience (C) Social 22.peer prompting 23.socializing 24.role plays 25.uses social expressions & amenities 26.imitates 27.no response 28.other	(A) Cognitive 1.non-verbal 2.states yes/no/ok 3.repeats 4.questions 5.clarifies 6.expands (syntax) 7.solicits more info 8.adds new information 9.corrects 10.commands 11.models 12.cues (B) Affective 13.praise & encourage 14.builds on child's feelings 15.shares own feelings 16.rejects 17.criticizes 18.inserts humor (C) Social 19.socializes 20.puts statement into social context 21.asks for group participation 22.builds on social dialogue 23.builds on social customs 24.other 25.no response	1. C 2. S

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TEACHING STRATEGIES

1	2	3	4	5	6	7	8
Initiater T/C	Teacher Obj's	Direction to C:H-F/Grp.	METHOD Physical	Language	Student Response	Teacher Feedback	Cont'd Interact

Observer:_____ Teacher:_____ Rm. # _____

Date:_____ Time:_____ Sch:_____ City:_____

Class Description: ( )Native Language ( )Standard Curriculum ( )ESL Other:_____

Dom. Lang: ( )English ( )Spanish ( )Portuguese ( )Haitian ( ) Chinese ( )Greek Other:_____

Grade Level: ( )K ( )1 ( )2 ( )3 ( )4 ( )5 ( )6 Other:_____

Content Area: ( )Math ( )Science ( )Reading ( )Language Arts ( )Social Studies Other:_____

Class Size: ( )0-5 ( )6-10 ( )11-15 ( )16-20 ( )21-25 ( )26-30 Other:_____

V. DATA ANALYSIS

The analysis of teaching strategies is based on a comparison of three instructional programs: native language, English-as-a-Second-Language (ESL), and standard English. Linguistic classroom interactions were observed in these programs and documented on the LIN-VEN Scale of Language Use. The elemental unit of analysis is the instructional chain. Instructional chains are compared across programs to identify continuities or discontinuities in language interactions in cognitive, affective, and social areas. Instructional chains are further analyzed link-by-link to reveal how programs have similar of dissimilar organization and direction.

Each of the three programs analyzed are interrelated in the transition process. Children are transitioned from native language to ESL and finally to standard English classrooms. Therefore, the purpose of this analysis is directly related to the initial research goal: the establishment of transition criteria based on the continuity of research objectives, instructional skills, and goals across programs.

The research data is analyzed to answer specific questions relating to the instructional process in native language, ESL, and standard English classrooms.

1. The first question is: What is the percentage of teacher objectives that occur in cognitive, affective, and social areas in each program?

Teacher Objectives	Native Language	ESL	Standard English
Cognitive Simple	43%	81%	73%
Cognitive Complex	10%	16%	13%
Affective	36%	1%	12%
Social	12%	2%	2%

It appears that all three programs concentrate instruction in the simple cognitive. ESL classrooms have the highest percentage of instruction in this cognitive area.

The previous chart can be further summarized by combining simple and complex cognitive into one catetory, cognitive, and combining affective and social into socio-affective.

Percentage of Instructional Time			
	Native Language	ESL	Standard English
Cognitive	53%	97%	86%
Socio-Affective	48%	3%	14%

In native language classrooms there is a nice split between cognitive and socio-affective uses of language. English-as-a-Second-Language classes have 97% of the observed instructional chains in the cognitive area of language use. These cognitive instructional chains include 81% in the simple cognitive. Standard English classrooms have 86% of instructional chains concentrated in the cognitive area.

This analysis of teachers' objective indicates that there is little

continuity across programs. The greatest differences are between native language and English-as-a-Second-Language classrooms. This is especially significant as ESL programs serve as the bridge between native language and standard English classrooms in the transition process. ESL classrooms are responsible for developing children's language in all three language areas, yet the analysis of this data indicates that little or no time is spent in socio-affective areas. This discontinuity that exists between native language and ESL classrooms is important for two reasons. First, children are not exposed to the socio-affective uses of language that are important for their success in mainstream English programs. Second, there is a big adjustment or "culture shock" for children going from native language classrooms, where teaching objectives are nicely divided between cognitive and socio-affective uses, to cognitively-oriented ESL classrooms. This data suggests that socio-affective areas of language must be carefully considered for integration in ESL programs so that the transition process will be more continuous for children.

The fact that there is a low percentage of teacher objectives concentrated in socio-affective areas of language in standard English classrooms results in little exposure to these uses of English for second-language-speakers. While dominant first-language English-speakers are exposed to socio-affective uses of English at home, second-language-speakers usually communicate in the native language at home and therefore are dependent on the school context for learning these language uses.

This data confirms standard English classroom teachers' and school advisory team members' hypotheses that children are not exposed to the

socio-affective uses of language in ESL programs. They do not, therefore, have these uses of language, which have been found necessary for good adjustment to mainstream English programs. Children from native language classrooms have been termed "anti-social." They often segregate themselves from English-only-speaking peers upon transition to mainstream English programming. They have also been noted to code-switch to their native language to express their feelings and to socialize. These reactions may be a clue to children's poor development of socio-affective language in English.

2. The second question addressed by this research is: How do teachers' objectives in primary classrooms (K-3) compare to those in upper-grade classroom (4-6) across programs and language areas?

Teaching Objectives - Kindergarten through Third Grade			
	Native Language	ESL	Standard English
Cognitive Simple	53.6%	87.9%	75.8%
Cognitive Complex	6.6%	8.0%	10.6%
Affective	30.4%	1.5%	11.9%
Social	9.4%	2.6%	1.7%

All K-3 programs focus teaching objectives in the simple cognitive. ESL, however, has the highest percentage of simple cognitive teacher objectives.

Teaching Objectives - Grades Four through Six			
	Native Language	ESL	Standard English
Cognitive Simple	44.3%	84.2%	72.1%
Cognitive Complex	12.9%	14.9%	14.5%
Affective	27.7%	0.3%	11.5%
Social	15.1%	0.6%	1.9%

The instructional patterns in Grades 4-6 are similar to those seen in Grades K-3. Instruction in the cognitive domain is focused in the simple cognitive. Although there are higher percentages of cognitive complex teacher objectives, the percentage of these objectives in the upper grades is not significantly higher than that seen in primary grades.

A summary of these tables in made in the following two tables by collapsing cognitive and social affective areas.

Teaching Objectives - Kindergarten through Third Grade			
	Native Language	ESL	Standard English
Cognitive	61%	96%	87%
Socio-Affective	39%	4%	13%

Teaching Objectives - Grades Four through Six			
	Native Language	ESL	Standard English
Cognitive	57%	99%	89%
Socio-Affective	43%	1%	11%

It is often stated that there is more socio-affective use of language in the primary grades, where native language instruction is emphasized. However, in comparing upper and lower grade classrooms, there is no significant difference between groups in any of the three programs. Native language classrooms maintain the almost equal split between cognitive and socio-affective language uses. ESL classrooms continue to manifest cognitive teaching objectives. Standard English classrooms also heavily concentrate instructional objectives in the cognitive domain.

3. The third question addresses the belief that Romance languages, such as Spanish and Portuguese, are "affective languages" and therefore place emphasis on socio-affective linguistic interactions. Thus, the question must be posed: How do the uses of language compare across language groups including Spanish, Portuguese, Haitian, Chinese, and English?

Program Teaching Objectives					
	English	Spanish	Portuguese	Haitian	Chinese
Cognitive Simple	97.0%	34.6%	56.7%	41.1%	31.8%
Cognitive Complex			12.2%	15.9%	10.4%
Affective	3.0%	47.3%	21.9%	30.4%	46.1%
Social		18.1%	9.2%	12.6%	11.7%
Total no. of instructional chains:	2836	2819	2926	1825	1933

The collapsed variables, cognitive vs. socio-affective, are manifested in the chart below.

	Program Teaching Objectives				
	English	Spanish	Portuguese	Haitian	Chinese
Cognitive	97.0%	44.6%	68.8%	57.0%	42.2%
Socio-Affective	3.0%	55.4%	31.2%	43.0%	57.8%

The comparison of all five programs reveals that English classes still appear to be the most cognitively oriented. Romance languages, Spanish and Portuguese, are not more heavily weighted with socio-affective language objectives than Haitian or Chinese. The Chinese classrooms, in fact, have the highest percentage of socio-affective teacher objectives as documented on the LIN-VEN Scale of Language Use.

Native language classrooms appear relatively similar. The high percentage of socio-affective language objectives seen in native language classrooms as compared to English classrooms gives further support to the noted discontinuity between teacher objectives in English and native language classrooms. The following questions reveal how other links in the instructional chain compare across programs.

4. Who initiates most of the interactions in each program?

Initiator	Native Language	ESL	Standard English
Child	32.7%	6.3%	4.8%
Teacher	67.3%	93.7%	95.2%

Native language classrooms have many more interactions initiated by children. Child-initiated interactions account for 32.7% of the interactions in native language classrooms. In ESL classes, children initiated 6.3% of

interactions, and 4.8% of interactions were initiated by children in standard English classrooms. The difference in percentages of child-initiated interactions again points to the discontinuity between native and English language classrooms. Children who are transitioned to English programs are confronted with a very different classroom structure. These children, who were encouraged in native language classrooms to initiate verbal sequences, are expected to sit, listen, and respond to teacher-initiated interactions. This difference in programmatic structure may make adjustment difficult for some transitioned children. In comparing English and native language programs, the greatest percentage of child-initiated interactions occurs in Chinese classrooms.

Initiator	English ESL & Standard English	Spanish	Portuguese	Haitian	Chinese
Child	11.1%	17.2%	26.8%	31.1%	45.3%
Teacher	88.9%	82.8%	73.2%	62.9%	54.7%

All native language programs, however, have a higher percentage of child-initiated interactions when compared to English programs.

5. What is the percentage of classroom time spent on teaching objectives in cognitive areas across programs?

Cognitive Objectives				
Teaching Objectives	Native Language	ESL	Standard English Curriculum	Total Number of Observations
Cognitive Simple				
1. Recalls information	8.3%	7.2%	7.2%	426
2. Gives facts	10.7%	13.5%	12.4%	630
3. Labels	5.7%	23.7%	15.9%	667
4. Identifies procedures	12.0%	21.6%	31.0%	1048
5. Describes or defines	2.8%	8.7%	5.4%	358
6. Clarifies or categorizes	0.6%	5.3%	1.1%	94
Cognitive Higher Level				
7. Comprehension	1.5%	4.3%	9.1%	212
8. Applies rules	2.4%	1.3%	4.3%	137
9. Evaluates or draws conclusions	1.4%	0.4%	1.5%	65
10. Compares and contrasts	0.4%	1.0%	1.8%	59
11. Analyzes	2.0%	0.8%	2.9%	109
12. Synthesizes	0.0%	0.0%	0.7%	12
13. Creates or produces	0.4%	0.0%	0.1%	32

There was a total of 6,426 classroom observations. Out of these, 3,949 manifested instructional objectives in the cognitive domain. The greatest number of observations, 3,223, was in the simple cognitive area. Only 726 linguistic interactions were documented as higher cognitive.

The simple cognitive objectives that occurred most frequently across programs were Gives facts, Labels, and Identifies procedures. About one quarter of the verbal interactions in ESL classrooms were directed at labeling. Almost another quarter of the interactions were focused on identifying procedures. Standard English classrooms spent approximately one third of observed classroom time identifying procedures. Native language classrooms spent significantly less time identifying procedures (12%), giving facts (10.7%), and labeling (5.7%) in comparison to ESL and standard English classrooms. This could reflect the fact that native language classrooms were less cognitively-oriented overall.

6. How do upper grade level (4-6) and lower grade level (K-3) teacher objectives compare across programs?

Cognitive Objectives by Grade Levels						
Teaching Objectives	Native Language		ESL		Standard English	
	K-3	4-6	K-3	4-6	K-3	4-6
Cognitive Simple						
1. Recalls information	12.4%	11.5%	8.8%	3.1%	5.1%	8.4%
2. Gives facts	10.4%	10.3%	14.0%	12.5%	8.5%	14.5%
3. Labels	9.5%	4.3%	23.9%	23.4%	18.9%	14.3%
4. Identifies procedures	12.7%	11.0%	23.3%	17.4%	36.0%	28.2%
5. Describes or defines	4.4%	2.6%	9.9%	5.6%	5.3%	5.5%
6. Clarifies or categorizes	0.5%	0.5%	6.5%	2.2%	1.7%	0.8%
Cognitive Higher Level						
7. Comprehension	1.4%	2.2%	6.1%	3.7%	5.5%	16.8%
8. Applies rules	3.2%	1.6%	1.5%	1.5%	0.9%	11.5%
9. Evaluates or draws conclusions	0.4%	1.6%	0.0%	0.9%	0.8%	1.8%
10. Compares and contrasts	0.2%	2.3%	0.2%	2.8%	0.0%	2.7%
11. Analyzes	0.0%	1.9%	0.0%	2.8%	3.4%	2.6%
12. Synthesizes	0.0%	0.1%	0.0%	0.0%	0.0%	1.1%
13. Creates or produces	0.9%	1.9%	0.0%	0.0%	0.8%	0.8%

Native language, ESL, and standard English classrooms appear to have relatively similar patterns in lower and upper grades. There are slightly more higher level cognitives in the upper grades. Standard English classrooms have the highest percentage of higher cognitive skills

The comparison of English and native language classrooms, including Spanish, Portuguese, Haitian, and Chinese, reveals that in English classrooms, labeling is by far the teaching objective observed most often. Teachers spend 83.3% of classroom time in verbal interactions that are based on labeling. Although labeling new words is a significant part of ESL classes, the large amount of time spent on these objectives may be excessive. Spanish, Portuguese, Haitian, and Chinese classes spend the highest percentage of classroom time on the teaching objective of information recall. The percentages across language programs are: Spanish, 10.7%; Portuguese, 12.2%; Haitian, 11.2%; and Chinese, 12.1%. Identifying procedures was observed to closely follow information recall as a teaching objective in these classes.

7. What is the percentage of classroom time spent on teaching objectives in the affective area across programs?

Teaching Objectives Affective	Native Language	ESL	Standard English	Number of Observations
14. Identifies, labels, or describes feeling	4.9%	0.0%	0.6%	144
15. Elicits students' free expression of emotions	9.0%	0.0%	0.5%	257
16. Expresses concern for students' feelings and well-being	4.1%	0.0%	1.6%	139
17. Gives personal message	11.7%	0.3%	4.9%	402
18. Judges behavior	4.2%	0.9%	4.0%	186

Native language classes far exceeded ESL and standard English classes in the percentage of classroom time spent on affective teaching objectives. The greatest difference in programs was seen between native language and ESL classes. ESL classrooms spent almost no time on teaching objectives that required children to use affective language. While there was slightly more affective language use in standard English classrooms, the overall percentage was not significant. Thus, children who learn English in school are rarely exposed to affective language uses.

8. How do lower and upper grades compare in the use of affective teaching objectives?

Teaching Objectives Affective	Native Language		ESL		Standard English	
	K-3	4-6	K-3	4-6	K-3	4-6
14. Identifies, labels, or describes feeling	6.7%	4.9%	0.0%	0.0%	1.3%	0.2%
15. Elicits students' free expression of emotions	6.3%	3.8%	0.0%	0.0%	0.0%	0.8%
16. Expresses concern for students' feelings and well-being	3.8%	1.5%	0.0%	0.0%	0.4%	2.2%
17. Gives personal message	8.4%	9.3%	0.4%	0.0%	5.8%	4.4%
18. Judges behavior	5.7%	3.0%	1.1%	0.3%	4.3%	3.8%

There was a higher percentage of affective teaching objectives in primary classrooms (K-3) in native language programs. Giving personal messages and eliciting students' expression of feelings occurred most often. Primary and upper level ESL classrooms were similar in having little or no use of affective language. Standard English classrooms had slightly more affective teaching objectives in the primary grades. Giving personal messages and jusging behavior were the teaching objectives that were manifested to the greatest extent in classroom verbal interactions.

9. How do native language programs compare in percentage of affective teaching objectives? Affective objectives were manifested across native language programs as seen in the following chart:

Teaching Objectives Affective	Spanish	Portuguese	Haitian	Chinese
14. Identifies, labels, or describes feeling	11.9%	2.9%	8.0%	3.1%
15. Elicits students' free expression of feeling	6.7%	4.3%	4.8%	15.6%
16. Expresses concern for students' feelings and well-being	5.6%	2.0%	1.6%	6.2%
17. Gives personal messages	13.9%	6.5%	10.0%	16.4%
18. Judges behavior	6.3%	4.7%	1.6%	3.6%

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Chinese programs had overall the greatest percentage of verbal interactions directed toward affective teaching objectives. The greatest percentage of verbal interactions were directed toward eliciting students' free expression of emotions and giving personal messages. Spanish and Haitian programs followed Chinese programs in affective language use. Giving personal messages was the affective objective utilized most in these programs. Portuguese programs had relatively fewer affective teaching objectives.

10. What is the percentage of classroom time spent on teaching objectives in the social area across programs?

Teacher Objectives	Native Language	ESL	Standard English	Number of Observations
19. Focuses lessons around group interactions	5.7%	1.2%	0.6%	182
20. Focuses language in formal social situations (games)	1.5%	6.2%	8.5%	47
21. Focuses language in informal social situations	5.3%	0.5%	1.6%	176
22. Identifies amenities or pleasantries	1.2%	0.5%	0.3%	44
23. Structures activities around social functions of language	0.8%	0.2%	0.0%	23
24. Arranges social group interactions between dominant and second-language-learners	0.5%	0.0%	0.0%	14
25. Identifies social roles	1.8%	0.4%	0.0%	55

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Native language classrooms had overall a significantly greater number of teaching objectives in the social area. Verbal interactions in native language classrooms focused around group interactions in informal situations. Standard English programs, on the other hand, focused on language interactions in formal social situations. There is noted to be no continuous flow of social teaching objectives from native language to ESL to standard English. This is especially significant for children who are transitioned across programs. Children who have experienced group-centered lessons in native language classrooms are transitioned to ESL and English language classrooms, which focus on formal individualistic rather than group-centered lessons. Thus, children must not only adjust to the English language but to a new pedagogical method.

11. How do lower and upper elementary grades compare in use of social teaching objectives?

Social Teaching Objectives	Native Language		ESL		Standard English	
	K-3	4-6	K-3	4-6	K-3	4-6
19. Focuses language around group interactions	6.7%	9.2%	1.7%	0.0%	0.4%	0.7%
20. Focuses lessons in formal social situations (games)	2.7%	2.7%	0.2%	6.0%	0.0%	8.5%
21. Focuses language in informal situations	5.0%	5.6%	0.7%	0.0%	1.1%	1.8%
22. Identifies amenities or pleasantries	0.8%	3.3%	0.6%	0.0%	0.7%	0.1%
23. Structures activities around social functions of language	1.2%	1.0%	0.0%	0.0%	0.1%	0.0%
24. Group interactions between dominant and second-language-speakers	1.2%	1.6%	0.0%	0.0%	0.0%	0.0%
25. Identifies social roles	0.8%	3.0%	0.0%	0.0%	0.4%	0.6%

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Out of the 990 native language classroom observations equally divided between upper and lower grades, group-focused teaching objectives were documented as composing 6.7% of Grades K-3 and 9.2% of Grades 4-8 instructional time. Group-focused linguistic interactions were significantly higher in both lower and upper grades in native language classrooms. The emphasis on group-interactions was slightly greater in the upper grades. A larger percentage of language lessons were directed toward informal rather than formal situations. Teachers in native language classrooms also, to some extent, arranged interactions between dominant-English- and second-language-speakers.

ESL classrooms had 6% of a total of 982 classroom observations directed toward formal social interactions in upper grades. There were only 0.2% in primary grades. Primary ESL classes had 1.7% of instructional time devoted toward group interactions. This is in comparison to 0% in upper level ESL classes. Other than these two social objectives, there was little focus on social objectives.

Standard English classrooms had 8.5% of instructional time spent on teaching objectives in formal social situations in the upper grades. This social teaching objective, however, did not appear in lower grades. Overall, there was significantly little instructional time concerned with social objectives. It is also important to note that although ESL and standard English were transitional programs, there was no attention placed on pairing dominant-English-speakers with second-language-speakers. This is especially significant since this method has been documented as an effective language learning strategy.

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12. How do native language programs compare in the use of social teaching objectives?

Social Teaching Objectives	Spanish	Portuguese	Haitian	Chinese
19. Focuses language around group interactions	6.3%	7.0%	14.4%	12.5%
20. Focuses lessons in formal social situations (games)	4.0%	2.5%	0.0%	0.0%
21. Focuses langauge in informal situations	3.1%	2.6%	3.6%	9.2%
22. Identifies amenities or pleasantries	5.8%	0.4%	0.8%	0.2%
23. Structures activities around social functions of language	1.8%	0.3%	3.2%	0.2%
24. Arranges social interactions between dominant and second-language-speakers	0.0%	1.4%	0.0%	0.0%
25. Identifies social roles	2.2%	1.2%	3.2%	1.9%

Haitian programs had the highest percentage of instructional time focused on group interactions. This was followed by Chinese programs. Chinese programs had the highest number of linguistic interactions focused on informal language usage.

13. What is the direction of the verbal chain: to the male child, to the female child, or to the group?

Direction of Verbal Chain	Native Language	ESL	Standard English
Female Child	21.9%	20%	23%
Male Child	37.0%	25%	30%
Group	41.1%	54%	46%

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The flow of verbal interactions is similar in the three programs. The greatest number of interactions are directed toward the group. The is a slightly higher percentage of verbal interactions directed toward males. This is seen more in native language classrooms.

14. Is there any difference in direction of the verbal chains in lower grades (K-3) and upper grades(4-6)?

Grades K-3			
Direction of Verbal Chain	Native Language	ESL	Standard English
Female Child	28.0%	21.2%	16.2%
Male Child	26.5%	29.3%	42.3%
Group	45.5%	49.5%	41.5%

Grades 4-6			
Direction of Verbal Chain	Native Language	ESL	Standard English
Female Child	19.0%	17.1%	27.9%
Male Child	20.1%	16.8%	23.7%
Group	60.0%	66.0%	48.4%

Grades K-3 in native language and ESL have similar directional patterns of verbal flow. Verbal chains are about equally divided between individual child male/female and group. Standard English classrooms have a disproportionate amount of verbal interactions directed toward male children.

Grades 4-6 have the majority of verbal interactions directed toward the group. This is especially noted in native langauge and ESL classrooms.

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15. Is there any difference in direction of verbal chains in English and native language programs?

Direction of Verbal Chain	English	Spanish	Portuguese	Haitian	Chinese
Female Child	33.0%	25.5%	22.9%	26.0%	31.5%
Male Child	11.1%	27.1%	25.8%	12.0%	58.5%
Group	55.6%	47.4%	51.4%	62.0%	23.3%

The combination of ESL and standard English programs reveals that over half of classroom verbal interactions are directed toward the group. The flow of verbal chains to individuals reveals that teachers direct more interaction toward females.

In comparing native language classrooms, Spanish and Portuguese classes are very similar. Whereas Haitian programs direct most interactions toward the group, Chinese programs appear to be more male-directed. This fact may be explained by the higher percentage of males in Chinese programs.

16. How do physical methods compare across programs?

Physical Method	Native Language	ESL	Standard English
Context-Oriented	72.9%	86.9%	75.8%
Non-Context-Oriented	26.9%	13.1%	24.2%

There were 2,790 observations recorded in native language classrooms. Almost three quarters (72.9%) of these linguistic interactions were context-oriented. All native language programs tended to structure linguistic interactions around subject matter or socio-affective topics of discussion. The other quarter of verbal interactions were largely social in nature

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and involved affective language use.

Standard English programs looked similar to native language classrooms in overall percentages. Out of 2,134 observations in English classrooms, 75.8% were context-oriented and 24.2% were non-context-oriented. Although on the surface the percentages of linguistic interactions were similar, further analysis of specific chains recorded in the two programs revealed significant differences. Whereas context-oriented verbal chains in native language classrooms included cognitive, affective, and social areas of language, the chains in standard English classrooms were for the most part cognitively oriented. The non-context-oriented chains did not focus on affective language use for socio-affective teacher-student dialogue, as they did in native language classrooms, but rather on judging student or group behavior in terms of discipline. Non-context-oriented verbal chains in standard English classrooms were one-way communications in that they were verbal chains that did not elicit student response.

ESL classes had the highest percentage of context-oriented verbal chains. Of the 2,510 classroom observations in ESL classrooms, 86.9% were characterized by simple cognitive teaching objectives related to labeling and vocabulary development in subject areas. The 13.1% of non-context-oriented linguistic interactions were much like standard English classrooms in that judging student behavior was the most frequently documented objective.

A comparison of context- and non-context-oriented verbal interactions across programs and grade levels revealed that native language classrooms

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had the highest percentage of continued verbal interactions. This means that verbal interactions involved teacher feedback which encouraged further student language. Native language classrooms were also the only group to have verbal chains that were divided across cognitive, affective, and social areas. ESL and standard English classrooms tended to be almost exclusively cognitively oriented. Non-context-oriented affective chains were used by teachers, for the most part, to judge student or group behavior.

17. How do language methods compare across programs?

Language Method	Native Language	ESL	Standard English
1. Soliciting Information	7.3%	9.2%	2.1%
2. Drilling	0.6%	2.3%	0.8%
3. Questioning	27.3%	52.7%	43.6%
4. Modeling	7.1%	6.7%	3.8%
5. Commanding	12.9%	13.2%	19.7%
6. Explaining	14.5%	5.7%	17.2%
7. Peer Prompting	2.8%	2.5%	2.2%
8. Code-switching	0.3%	0.2%	0.1%
9. Role-playing	1.0%	0.4%	0.1%
10. Socializing	9.7%	1.0%	2.1%
11. Bridging	0.8%	0.1%	0.1%
12. Chunking	1.3%	0.0%	0.0%
13. Translating	1.5%	0.4%	0.1%
14. Cueing	2.3%	2.3%	1.3%
15. Narrating	8.4%	0.7%	0.7%
16. Commenting	8.4%	2.1%	5.9%
17. Other	0.3%	0.0%	0.0%

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All three programs (native language, ESL, and standard English classrooms) utilized questioning as the main language method for instruction. ESL classes employed a questioning approach to learning for over half of classroom time. This is compared to the 43.6% of classroom time spent by standard English classrooms and 27.3% spent by native language classrooms. Explaining and commanding were noted to be the next most used methods. There was no significant difference in lower grades (K-3) and upper grades (4-6).

Native language classrooms appeared to have the most diversified language teaching methods. Socializing and modeling, especially, were observed in these classrooms to a greater extent than in the other two programs.

A comparison of native language programs manifested Spanish and Chinese programs to be making the most use of socializing and role-playing as teaching methods. Spanish and Chinese programs spent 13.4% of the classroom time observed on socializing and 9.8% on role-playing. Haitian programs appeared to be the only native language group which encouraged peer prompting as a language learning method (10.6%).

18. How do ESL classes build on the natural language learning strategies of children?

It is significant to note than ESL programs spent little or no observed classroom time on language teaching methods such as socializing (1%), peer prompting (2.5%), bridging (0.1%), chunking (0%), and cueing (2.3%). (See Appendix for definitions of language teaching methods.) Although

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these language methods have been documented as the natural second-language learning strategies of children, they were not employed to any significant extent in ESL teaching. Therefore, it can be stated, based on the observations documented, that ESL classes do not build on the natural language learning strategies of children but rather rely on standard questioning techniques.

19. How do students use language opportunities in cognitive areas across programs?

How Students Use Language Opportunities (Cognitive)	Native Language	ESL	Standard English
1. Non-verbal response	7.5%	3.8%	5.4%
2. States yes/no	4.5%	6.5%	4.5%
3. Repetition	2.8%	6.4%	0.7%
4. Identifies/ or labels	6.9%	28.8%	14.2%
5. Gives facts	14.4%	11.5%	14.4%
6. Questions	7.3%	2.4%	5.2%
7. Elaborates or gives additional information	2.7%	5.1%	2.9%
8. Performs an activity	10.8%	4.7%	15.8%
9. Choral response	4.5%	4.6%	4.2%
1 . Code-switches	0.5%	0.2%	0.0%
11. Describes or defines	1.7%	4.5%	1.7%
12. Compares	0.5%	0.5%	0.3%
13. Evaluates	0.7%	0.4%	2.0%
14. Analyzes	1.2%	0.2%	1.5%
15. Synthesizes	0.3%	0.2%	0.2%
16. Creates	0.9%	0.6%	0.6%

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Children's use of language opportunities was revealed to be directly related to the preceeding links in the verbal chain, teaching objective and language teaching method. Of the 6,429 documented observations across programs in the cognitive area, the greatest percentage of children's responses were categorized as: gives facts, identifies or labels, and performs an activity. Children gave facts, identified, labeled, or performed an activity in response to the language teaching methods of questioning and explaining. The instructional technique of questioning requires children to give facts, identify, or label. An explanation given by a teacher is often followed by children performing an activity.

The very low percentages of children's responses across programs that manifest higher level cognitive skills, such as comparing, evaluating, analyzing, synthesizing, and creating, mirror the dearth of teaching objectives that place emphasis on verbal interactions requiring higher level cognitive skills. The highly limited number of children's responses in higher cognitive areas was evidenced in upper grades as well as in lower grades. Although there was, however, a slightly higher percentage in the upper grades, it was not a significant amount of the total number of verbal interactions recorded.

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Higher Level Cognitive Responses	Native Language K-3	Native Language 4-6	ESL K-3	ESL 4-6	Standard English K-3	Standard English 4-6
Describes or defines	1.3%	1.6%	4.1%	2.6%	0.8%	2.1%
Compares	0.2%	1.5%	0.0%	1.2%	0.2%	0.4%
Evaluates	0.2%	0.3%	0.0%	1.2%	0.4%	2.9%
Analyzes	0.2%	0.0%	0.0%	0.6%	0.4%	1.4%
Synthesizes	0.0%	1.1%	0.0%	0.0%	0.2%	0.6%
Creates	1.5%	1.2%	0.4%	0.9%	0.5%	0.7%

Overall, native language classes had the largest percentage of children's verbal responses in Grades K-3 recorded as higher cognitive. Describing or defining and creating were the predominant responses. ESL classes had the greatest percentage of responses categorized as describes or defines. This may reflect an extension of the lower level response of identifying or labeling.

Standard English classrooms had the largest percentage of higher level cognitive responses in the upper grades. The highest percentage was evaluating, which was 2.9%. This percentage, however, did not reflect a significant part of the total number of 3,360 verbal interactions recorded in Grades 4-6.

A comparison of native language programs reveals that Haitian and Chinese programs had the greatest number of children's responses in the higher cognitive area. Portuguese programs, however, had the greatest number of children's responses labeled "creates."

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Higher Level Cognitive Responses	Spanish	Portuguese	Haitian	Chinese
Describes or defines	1.9%	1.5%	3.2%	1.8%
Compares	0.4%	0.7%	1.6%	1.2%
Evaluates	0.0%	0.4%	0.0%	1.3%
Analyzes	0.6%	0.7%	0.6%	3.2%
Synthesizes	0.0%	0.4%	1.6%	0.0%
Creates	0.%	2.4%	0.0%	0.0%
Total	2.9%	6.1%	7.0%	7.7%

20. How do students use language opportunities in affective areas across programs?

How Students Use Language Opportunities (Affective)	Native Language	ESL	Standard English
17. Expresses feelings	11.8%	0.2%	0.4%
18. Humor	1.1%	0.6%	0.6%
19. Gives overt expression of concern	0.4%	0.4%	1.2%
20. Complains	0.8%	0.0%	0.5%
21. Relates to personal experience	4.6%	0.0%	0.5%

Children in native language programs were observed responding with an expression of feelings three times as often as children in the other two programs. There were no significant differences between upper and lower grades.

The 1,861 classroom observations in ESL programs revealed that only 0.2% of children's responses could be categorized as expression of feelings. Similarly, the 1,130 observations in standard English classrooms manifested only 0.4% of children's responses in this category.

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This large discrepancy between native language and English programs is highly significant. It is indicative of the absence of affective objectives set forth be teachers in English programs. The use of affective objectives in the classroom is especially important for second-language learners. These children express themselves affectively at home in their native tongue and are therefore highly dependent on the school to provide practice opportunities in affective language use in English.

The following chart compares English programs (ESL and standard English) with native language programs.

How Students Use Language Opportunities (Affective)	English	Spanish	Portuguese	Haitian	Chinese
17. Expresses feelings	0.0%	8.1%	6.9%	11.2%	18.6%
18. Humor	0.0%	1.3%	0.5%	0.8%	1.7%
19. Gives overt expression of concern	0.0%	0.0%	0.1%	0.8%	0.8%
20. Complains	0.0%	0.4%	0.7%	0.0%	1.0%
21. Relates to personal experience	0.0%	11.4%	2.4%	6.4%	3.4%

Chinese programs seem to elicit the greatest number of affective responses on the part of children. Chinese programs are closely followed by Spanish and Haitian programs. It is significant to note that in a comparison of native language and English programs, children in English programs are revealed to give, in effect, no affective responses.

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21. How do students use language opportunities in social areas across programs?

How Students Use Language Opportunities (Social)	Native Language	ESL	Standard English
22. Peer prompting	1.8%	0.8%	0.3%
23. Socializing	7.8%	0.1%	0.0%
24. Role play	1.0%	0.0%	0.0%
25. Uses social expressions and amenities	1.0%	0.2%	0.7%
26. Imitates	0.4%	0.7%	0.7%
27. No response	1.9%	17.0%	21.9%
28. Other	0.4%	0.0%	0.0%

Student responses classified as social occurred almost exclusively in native language classes. Socializing and peer prompting were the responses used most frequently by children. There were no significant differences across grade levels or language groups.

It is interesting to note that the category "no response" had significantly high percentages in standard English and ESL classes. Almost one quarter of the children's reactions in standard English classrooms and 17% of reactions in ESL classes were classified as no response. This is indicative of verbal chains that do not elicit extended discourse. The high percentage of ESL children's responses in this category is significant, especially in relation to the fact that children learn the second language to the extent that they are given practice opportunities. Verbal chains that do not elicit children's verbal responses do not encourage second-language learning.

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22. How does cognitive teacher feedback differ across programs?

Feedback from Teacher (Cognitive)	Native Language	ESL	Standard English
1. Non-verbal	2.1%	2.4%	1.3%
2. States yes/no/OK	3.9%	27.3%	9.9%
3. Repeats	5.6%	13.3%	9.9%
4. Questions	3.4%	7.3%	7.1%
5. Clarifies	7.8%	9.7%	7.7%
6. Expands (syntax)	1.0%	0.5%	1.2%
7. Solicits more information	5.5%	1.7%	4.1%
8. Adds new information	8.4%	0.8%	11.9%
9. Corrects	3.7%	4.4%	1.7%
10. Commands	5.4%	2.6%	6.0%
11. Models	1.6%	1.2%	1.5%
12. Cues	0.8%	2.7%	0.2%
Total classroom time:	49.2%	74.1%	83.6%

The verbal feedback the teacher gives is one of the most important links in the instructional chain. The teacher's feedback either continues the verbal interaction or ends it. Feedback that elicits student response gives children practice opportunities. This is especially important for ESL students, who learn the second language only to the extent that they are given these practice opportunities.

Teacher feedback to students such as "yes," "no," "OK," or repeating ends the instructional chain and verbal interaction. ESL classes, which are most concerned with teaching language, have the highest percentage of

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teacher feedback responses in the yes/no/OK category (27.5%). This feedback results in the discontinuation of the verbal interaction. Responses categorized as "repeats" account for 13.3% of the verbal teacher feedback in in ESL classes. The other categories that result in discontinued verbal interactions, "corrects" and "commands," were also highly prevalent in ESL classrooms.

Native language and standard English classes gave less feedback that led to discontinued verbal interactions. Only 3.9% of native language teachers' feedback was categorized as "states yes/no/OK. Standard English teachers' feedback in this category was 9.9%.

The teacher feedback categories that resulted in a continuation of verbal interactions were: "questions," "expands," "solicits more information," "adds more information," "models," and "cues." These responses were found in the greatest number in native language and standard English classrooms.

While overall, standard English classes had the highest number of teachers' cognitive feedback responses (83.6%), the 74.1% cognitive feedback responses in ESL classes led to significantly fewer continued verbal chains.

The higher percentages of cognitive teacher feedback in English classes as compared to 49.2% in native language classes reflect again the cognitive orientation of these classrooms.

23. How does cognitive teacher feedback differ in lower and upper grade levels K-3 and 4-6?

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Feedback from Teacher (Cognitive)	Native Language K-3	Native Language 4-6	ESL K-3	ESL 4-6	Standard English K-3	Standard English 4-6
1. Non-verbal	3.0%	0.3%	2.7%	1.6%	0.0%	2.0%
2. States yes/no/OK	7.1%	3.0%	27.4%	17.7%	9.5%	10.2%
3. Repeats	11.5%	2.3%	12.2%	16.1%	9.8%	10.0%
4. Questions	3.8%	3.2%	4.1%	8.5%	2.7%	9.4%
5. Clarifies	4.7%	6.2%	9.3%	10.7%	4.1%	9.7%
6. Expands (syntax)	0.5%	1.8%	0.7%	0.0%	0.8%	1.4%
7. Solicits more information	3.1%	6.5%	0.0%	2.3%	3.3%	4.5%
8. Adds new information	6.9%	14.2%	0.8%	1.0%	11.0%	11.8%
9. Corrects	3.7%	5.9%	2.2%	10.1%	1.7%	10.1%
10. Commands	3.4%	0.8%	3.2%	0.9%	12.7%	0.9%
11. Models	1.7%	3.6%	1.0%	1.6%	0.0%	1.6%
12. Cues	1.0%	1.5%	3.3%	0.9%	0.0%	0.9%

Cognitive teacher feedback did not differ significantly at lower and upper grade levels. There was a slightly greater number of verbal responses that led to the discontinuation of verbal interaction in the lower grades (K-3) in native language classrooms. Upper grades in all programs had somewhat more instructional chains that led to continued verbal chains.

24. How does cognitive teacher feedback differ across language groups?

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Feedback from Teacher (Cognitive)	English (Standard English and ESL)	Spanish	Portuguese	Haitian	Chinese
1. Non-verbal	3.7%	0.5%	2.8%	0.8%	2.6%
2. States yes/no/OK	37.4%	6.3%	6.5%	0.0%	1.5%
3. Repeats	23.2%	5.0%	8.6%	1.6%	2.3%
4. Questions	14.4%	1.4%	4.7%	3.2%	3.2%
5. Clarifies	17.4%	3.4%	6.7%	4.0%	11.8%
6. Expands (syntax)	1.7%	0.0%	1.4%	1.6%	0.9%
7. Solicits more information	5.8%	3.4%	5.9%	1.6%	9.2%
8. Adds new information	12.7%	3.6%	9.5%	25.0%	5.7%
9. Corrects	6.1%	4.5%	5.7%	1.2%	2.3%
10. Commands	8.6%	2.3%	2.6%	1.6%	0.2%
11. Models	2.7%	2.7%	1.4%	6.0%	10.5%
12. Cues	2.9%	0.9%	1.1%	1.6%	0.0%

English programs had a significantly higher number of teacher feedback responses in the categories "states yes/no/OK," "repeats," "questions," and "clarifies." Teachers in Chinese programs tended to solicit more information from children than did teachers in the other programs. Chinese programs also showed more feedback in the modeling category than other native language and English programs. This type of feedback encouraged continued verbal interactions.

25. How does affective teacher feedback differ across programs?

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Feedback from Teacher (Affective)	Native Language	ESL	Standard English
13. Praises and encourages	9.1%	6.7%	6.8%
14. Builds on child's feelings	5.2%	0.4%	0.2%
15. Shares own feelings	2.9%	0.0%	1.7%
16. Rejects	1.7%	0.2%	0.6%
17. Criticizes	2.8%	0.9%	2.1%
18. Inserts humor	5.4%	1.2%	0.7%
Total classroom time:	27.1%	9.4%	12.1%

25. Over one quarter of teachers' verbal feedback responses in native language programs were in the affective area. This is compared to 9.4% in ESL classrooms and 12.1% in standard English programs. The category "builds on children's feelings" was noted to result in the most continued verbal interactions. This means that teachers' feedback which built on children's feelings caused increased verbal input from children. The category "praises and encourages" was highly dependent on the type of praise or encouragement given as to whether it continued or ended the verbal chain. While praise and encouragement such as "Good; tell me more about it" tended to continue verbal interactions, one-word utterances such as "Fine" or "Good" usually ended verbal interchange.

26. How does affective teacher feedback differ in lower and upper grades?

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Feedback from Teacher (Affective)	Native Language K-3	Native Language 4-6	ESL K-3	ESL 4-6	Standard English K-3	Standard English 4-6
13. Praises and encourages	16.7%	5.9%	7.1%	5.7%	8.1%	4.4%
14. Builds on child's feelings	0.6%	3.2%	0.4%	0.0%	0.0%	0.1%
15. Shares own feelings	1.7%	7.7%	0.0%	0.0%	1.0%	2.0%
16. Rejects	0.8%	0.5%	0.2%	0.0%	1.5%	0.1%
17. Criticizes	3.0%	2.7%	1.2%	0.0%	4.4%	0.8%
18. Inserts humor	1.9%	2.7%	1.6%	0.0%	0.0%	1.1%

Native language classes tended to use slightly more affective feedback in the upper grades. ESL and standard English classes, conversely, tended to give more affective feedback in the lower grades.

27. How does affective teacher feedback differ across language groups?

Feedback from Teacher (Affective)	English (Standard English and ESL)	Spanish	Portuguese	Haitian	Chinese
13. Praises and encourages	16.7%	5.9%	17.0%	9.7%	12.8%
14. Builds on child's feelings	0.6%	3.2%	4.4%	4.8%	7.1%
15. Shares own feelings	1.7%	7.7%	2.9%	5.0%	3.7%
16. Rejects	0.8%	0.5%	0.7%	0.8%	0.4%
17. Criticizes	3.0%	2.7%	2.6%	0.0%	3.7%
18. Inserts humor	1.9%	2.7%	1.5%	0.0%	11.6%

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Portuguese programs spent the greatest percentage of classroom time (17.0%) praising and encouraging students. These programs were followed by English (16.7%) and Chinese (12.8%) programs. Chinese programs had the type of affective teacher feedback that most encouraged language input on the part of children. Chinese programs were also noted to have more humor inserted into daily classroom interactions.

28. How does social teacher feedback differ across programs?

Feedback from Teacher (Social)	Native Language	ESL	Standard English
19. Socializes	6.6%	0.2%	0.6%
20. Puts statement into social context	2.0%	0.4%	1.3%
21. Asks for group participation	2.0%	0.0%	0.3%
22. Builds on social dialogue	9.9%	0.6%	0.3%
23. Builds on social custom	2.7%	0.0%	0.2%
24. Other	0.5%	0.0%	0.6%
25. No response	0.9%	15.4%	22.1%

Native language classrooms far exceeded ESL and standard English programs in social as well as in affective teacher feedback. Teachers in native language classrooms encouraged children to give more verbal input by socializing and building on social dialogue. ESL and standard English programs spent a significantly small percentage of classroom time engaging in social discourse. Verbal interactions in English classrooms elicited individual rather than group participation, for the most part. This is

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significant again, especially for ESL classes. Although the literature suggests that children learn a second language naturally, through social conversation, little or no time was spent on this form of linguistic interaction in ESL classes. Thus, children did not have classroom opportunities to learn the social forms of the English language that are so necessary for daily communicative encounters.

29. How does social teacher feedback differ at lower and upper grade levels?

Feedback from Teacher (Social)	Native Language K-3	Native Language 4-6	ESL K-3	ESL 4-6	Standard English K-3	Standard English 4-6
19. Socializes	9.2%	5.6%	0.2%	0.0%	0.0%	0.9%
20. Puts statement into social context	1.8%	2.1%	0.5%	0.0%	1.5%	1.1%
21. Asks for group participation	12.4%	9.1%	0.0%	0.0%	0.0%	0.5%
22. Builds on social dialogue	1.6%	2.5%	0.9%	0.0%	0.4%	0.3%
23. Builds on social custom	2.7%	1.7%	0.2%	0.0%	0.0%	0.0%
24. Other	0.9%	0.7%	0.0%	0.0%	0.0%	0.9%
25. No response	0.0%	0.0%	13.0%	19.2%	30.0%	17.8%

There was noted to be very little difference in social feedback in upper and lower grades across programs. Native language classes spent a slightly greater percentage of classroom time giving social feedback in the primary grades. There were, however, no significant differences in upper and lower grades in ESL and Standard English classrooms.

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30. How does social teacher feedback differ across language groups?

Feedback from Teacher (Social)	English (Standard English and ESL)	Spanish	Portuguese	Haitian	Chinese
19. Socializes	0.8%	5.0%	1.3%	6.3%	6.9%
20. Puts statement into social context	1.7%	4.3%	0.6%	3.2%	3.1%
21. Asks for group participation	0.3%	8.4%	5.7%	10.6%	8.2%
22. Builds on social dialogue	0.2%	2.3%	2.2%	4.8%	5.4%
23. Builds on social customs	0.2%	6.7%	5.8%	11.3%	6.9%
24. Other	0.6%	0.0%	0.0%	0.0%	0.0%
25. No response	37.5%	0.0%	0.0%	0.0%	0.0%

Haitian and Chinese classes were noted to have the largest percentages of teacher feedback that was categorized as "socializes." Haitian programs manifested the greatest number of teacher feedback responses (11.3%) that built on social customs and asked for group participation. These programs were closely followed by Spanish and Chinese programs.

In generally evaluating percentages of social feedback across programs, it should be observed that the combined percentages of social feedback in ESL and standard English classrooms is significantly less than in each of the native groups. This points to a discontinuity in the type of language feedback in native language and English programs. While children receive a significant amount of affective and social feedback in native language

programs, this is not continued in ESL or standard English programs. This may, to some extent, result in the difficulty some children experience in the transition process.

31. What programs have more continued verbal interactions?

Continued Verbal Interaction	Native Language	ESL	Standard English
1. Continues	63.3%	27.8%	43.3%
2. Stops	36.7%	72.2%	56.7%

Native language classes have more continued verbal interactions than either ESL or standard English programs. This indicates that instructional chains in native language classrooms elicit more verbal response from children. ESL classes were found to have the lowest number of continued verbal chains. Children in these classes were noted to have the fewest opportunities to use language across the cognitive, affective, and social areas. Considering the fact that ESL classes are the link or bridge between native language and standard English classes, language instruction becomes very relevant to students' success in the process of transition from native language to English. This data raises the question of whether ESL classes are adequately preparing students for this transition.

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VI. SUMMARY OF FINDINGS

A comparative analysis of native language, English-as-a-Second-Language (ESL), and standard English programs was made. The six thousand classroom observations, including five million instructional chains, revealed discontinuities in programs across all links of instructional chains.

The first link of the chains, Who Initiates, manifested that native language classrooms had a significantly larger number of child-initiated verbal interactions. Whereas one third of the verbal interactions in native language classrooms were child-initiated, only 4.3% were child-initiated in English programs. This data implies that English programs are much more teacher-directed. Little opportunity is given children to become actively involved in setting the direction of verbal exchanges that occur in the classrooms.

The second link of the instructional chains analyzed was Teacher Objectives. There were again important differences revealed across programs. Native language classes had an almost equal split between instructional time spent on cognitive (53%) and socio-affective (48%) teaching objectives. ESL and standard English programs, contrarily, put almost all of their instructional emphasis on the cognitive domain. English-as-a-Second-Language programs spent 97% of classroom time on cognitive teaching objectives and 3% in socio-affective areas. Standard English classrooms spent 86% of the time in cognitive and 14% in socio-affective areas.

This difference in language emphasis in particularly noteworthy in

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terms of evaluating how ESL programs serve as the bridge between native language and standard English programs. The fact that there is such a large discrepancy between programs indicates that ESL instruction does not fulfill this bridging function. The ease with which children are transitioned to standard English programs greatly depends on how ESL programs develop all areas of the English language. To be successful in standard English programming, children must be able to communicate on a personal and social level as well as on a cognitive level. The development of socio-affective language is especially important for native-language-speakers who are only exposed to these aspects of the language at school. Socio-affective communication at home is usually in the first language.

The fact that the development of socio-affective language is important is confirmed by second-language acquisition studies. This research indicates that the development of socio-affective language not only results in better communicative ability but allows students to make a better adjustment to the second language and culture.

The third link of the instructional chains, Direction of Flow, accounts for the direction of verbal communication, to the child or to the group. Whereas native language programs tended to direct linguistic interactions to individuals, ESL and standard English programs were group-oriented. This indicates that children who are used to individualized instruction in native language programs are suddenly immersed in ESL programs, which do not provide this type of instruction. This may be a critical point to consider in terms of transitioning children successfully from native language to English programs. Group instruction rarely accounts for linguistic proficiency. Thus,

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children who are not totally proficient in English ...

group instruction.

The fifth link of the instructional chains is Language Method. Language methods had a different emphasis across programs. ESL classes spent over 30% of instructional time questioning. Over half the instructional chains collected in ESL classes asked children to identify or label something. The most typical question was: "What is this?" Instructional chain elements were as follows:

Teacher Objective - To identify or label
Direction - To group
Physical Method - Context-oriented
Language Method - Questioning
Student Use of Language Opportunity - Label
Teacher Feedback - Yes/No
Continued Interaction - Stops

This instructional chain allows little opportunity for children to use English in verbal discourse.

Standard English classrooms spent 43% of instructional time questioning students. Commanding was the second most utilized language method in ESL and standard English classrooms.

Native language classrooms, on the other hand, spent only 27.3% of classroom instructional time questioning students. Other language methods, such as peer prompting, socializing, and narrating, were also given emphasis in these classrooms. Native language classes were shown to engage actively in language methods that encouraged children to respond with socio-affective as well as cognitive statements.

This response of children, or How Student Uses Language Opportunities,

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is the sixth link in the instructional chains. Students' use of language most clearly reflected teaching objectives. Students in native language classes gave many more responses categorized as socio-affective, mirroring the emphasis on socio-affective teaching objectives in these classrooms. Activities in native language classrooms were noted to encourage active language interchange between students. Children in ESL classes, contrarily, were seldom engaged in active social discourse. Children in these classes gave one-word responses most frequently. Classroom observations in ESL programs revealed that little attention was given to arranging practice opportunities for second-language-speakers to use the English language in social conversation.

The seventh link in the instructional chains is Feedback from Teacher. Native language teachers gave feedback in all three areas of language, whereas in ESL and standard English classrooms, teachers primarily gave cognitive feedback.

The final link in the instructional chains is Continued Interaction. Native language classes had more documented continued verbal chains. This can be interpreted to mean that teachers in native language classrooms gave more feedback that encouraged children to use language. Most instructional chains in ESL programs stopped rather continued. Therefore, children in these programs were not given the practive opportunities that research has indicated to be crucial to the development of proficiency in a second language.

These noted discontinuities between programs make the transition process more difficult for children. ESL programs, which are meant to

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provide the bridge between native language and standard English programs, were not documented in this research as performing that function. In fact, the greatest programmatic shock to students comes as they move from native language to ESL instruction. The differences in teaching emphasis and approach cause children to spend an inordinate amount of time in adjustment. This interferes with the expediency with which they learn English. It also slows down the transition process from native language to standard programming. Even when children are said to be cognitively ready for standard English classrooms, they often fail to make an adequate social adjustment. This may reflect the lack of instructional emphasis in socio-affective areas in ESL classrooms.

Discontinuities were also found to exist across programs in language skill sequences. Teachers were often noted to be duplicating each other's efforts. Children were taught concepts all over again in English rather than given the English word labels for known concepts. As teachers developed the entry-exit language checklist, this propensity to reteach rather than build on what was known became more and more apparent.

In summary, it may be said that the transition process is made more difficult for children by the discontinuities that exist across native language, ESL, and standard English programs both in terms of teaching strategies and language skill sequences. A more continuous flow of instructional chains and language skill sequences across programs would not only result in easier and more successful transitioning for students but would establish the communication between programs so necessary for an integrated instructional process to take place.

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VII. CONCLUSION: IMPLICATIONS FOR RESEARCH, EDUCATIONAL PRACTICE AND POLICY

The collaborative effort between school staff and the research team had four important outcomes. First, it established working collegial relations between school staff from native language, ESL, and standard English classes. Second, the project developed a new collaborative model for research, including process elements and stages of research. Third, two tangible products resulted from the collaborative process: the LIN-VEN Language Observation Scale and the Entry-Exit Language Checklist. Finally, the project established a framework for the research efforts at one school to be transferred to other school sites.

Perhaps the most significant result of any research project is its transferability. While models have rarely been transferred successfully, processes have fared much better. The collaborative process, including the tangible products developed by this project, have been successfully transferred to other schools within the districts. This year, as a result of the project conducted at one school in Cambridge, teachers throughout the district are meeting bimonthly to collaborate on the development of entry-exit language checklists for Grades 2-8.

In analyzing the success of this project, it cannot be emphasized too strongly that there were two essential contributing elements: the process of collaboration and the development of a tangible product of mutual benefit. It was strongly stated by everyone involved in this project that these two elements were crucial to its success. Without the development of the product, the collaborative process would not have had the

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ultimate impact of school programmatic changes, just as without the process of collaboration, the product would not have resulted in the collegiality of staff members needed to implement the product. Thus, these two elements were crucial dependent variables that contributed to the project's positive outcomes.

The implications for research that can be directly derived from this project relate to the collaborative process and the production of a tangible product. Too often, school research has been strictly a theoretical endeavor. An outside researcher went into a school with a preconceived problem that he or she wanted to research. School personnel were the subjects for study, the "guinea pigs" so to speak. Researchers studied their subjects to document a theoretical issue rather than to innovate programmatic changes that would have positive effects on students.

Research in the past, then, has been focused on a hierarchical approach. The researcher alone was believed to have the expertise to define the research problem, set up the research design, and coordinate documentation and explanation of collected data. Other than being subjects, teachers were not involved in the research process. Amazingly enough, however, it was these same teachers who were expected to implement the research outcomes of projects with they had no involvement and, usually, to which they had no commitment.

This hierarchical approach is significantly different from the functional approach to research described in this project. The functional approach involved school staff in the research process from the beginning. School

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staff collaborate with the research team to state clearly the research problem that is relevant to the particular school setting. Teachers are involved in the research design. An effort is made to allow everyone to contribute according to their expertise rather than their hierarchical position. This functional approach gives credence to the fact that teachers are the ultimate implementors of any research outcomes. Teachers who are strongly committed and interested in research goals are thus more likely to implement the outcomes.

While there has been a recent emphasis in the research on collegiality, there has been little reference to how this collegiality can be developed. This project sets forth the evidence that collegiality is not just another theoretical construct but can be practically established through the process of collaboration used to create a tangible product. The creation of the product is important because it immediately establishes the success of the collaborative process. The product becomes the tangible evidence that a group of people were able to work together to devise something of mutual benefit. There is a sense of pride and accomplishment, then, that is the end result of the process, which gives people the positive feedback to use the process again in the future.

The creation of a product also becomes extremely important to the ultimate success of the research in bringing about programmatic changes. School staff use the product as a point of departure for continued collaboration. This was clearly seen at the Cambridge school site. The research school shared the product they developed with other schools in the district. This sharing resulted in a continuation of the collaborative

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process as teachers through the district continued in the development of language skill entry-exit checklists for all grades.

Thus, the functional-collaborative process has documented transfer value. The product developed as a result of the collaboration may or may not have, depending on school needs. The important factor is that collaboration is not an empty process but has feedback built into it through the creation of a product - the tangible evidence of the success of the process.

The researcher's role in the functional-collaborative research is one of guide rather than director. The researcher provides his or her expertise in a functional rather than a hierarchical role. The researcher thus becomes a partner in research with school staff. This new role of the researcher can be titled "collabormentor." The researcher functions as colleague and guide through the previously outlined stages in the collaborative process.

The pairing of the principal investigator (outsider) with one influential school employee (insider) is an important part of this collaborative process. Whereas the principal investigator can bring an objectivity to the identification of school needs, the school employee, working as site manager, offers the subjectivity of knowing the interworkings of the school system from an inside perspective. Frequent meetings between the principal investigator and site manager maintain the successful working balance between the input of outside researchers and inside staff members on an ongoing basis.

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Research that is based on this functional-collaborative model should adhere to the following premises:

1. The researcher takes a functional rather than a hierarchical role in research, becoming a colleague with school staff.
2. Roles in research are functional in that they are based on members' contributing according to their expertise.
3. Teachers are the key agents in effecting fundamental change and therefore should be involved in all phases of research, starting with a definition of the research problem.
4. Teachers are unlikely to effect change simply because a researcher tells them to. Teachers who take an active rather than receptive role in research, however, are more likely to implement research outcomes.
5. Research should not be program-specific but should involve a general school effort. Expertise and talent is thus shared among teachers working toward school goals rather than on isolated programmatic issues.
6. Research should be aimed at changing the performance of the group rather than individual teachers.
7. Collegiality can be defined in terms of peer support. The development of collegiality results from teachers' working together to develop a product of mutual benefit.
8. Research must have transfer value so that teachers as researchers at one school site can train other teachers at other sites in the

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use of the school-developed product. Ultimately, the teachers can train other teachers in the process of collaboration so that new products of mutual benefit can be developed. This approach both is cost-effective and tends to have greater impact through its multiplier effect.

In summary, school research should take a new functional-collaborative approach rather than the hierarchical approach used in the past. Functional-collaborative research gives equal roles to research team and school staff as collaborators in research. The researchers' theoretical expertise and the teachers' practical knowledge will produce research outcomes that will not only be innovative but, most important, will have practical relevance.

Practical relevance for research in education is particularly important at a time when public education is being questioned in terms of its practical results in adequately educating children. There are political groups who are currently lobbying for an "education voucher" system, which would enable parents to use their tax dollars for private rather than for public education. The premise of the supporters of the voucher system is that parents may get a better education for their children through private schools. If it is true that private education may offer better instructional programs, then it follows that the public educational system needs to be improved. It is ultimately the teachers in the public school system who can make educational changes that benefit students. Therefore, the role of teachers in educational research is crucial to the end result of program innovation, of which they are the implementors.

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The outcomes of this research should have profound implications for educational policy makers. To date, bilingual educational policy has been founded on the premise that all non-English-speaking students must become fluent in English to matriculate through the American public education system. How students move to English competence has not been directly addressed and is currently decided differently across the states. Since there is no national policy on how to educate non- and limited-English-speaking students, states have selected approaches based on the philosophy-rationale of the best-organized and aggressive of the political interest groups representing non- or limited-English-speaking students. Regardless of the state policy, no state has successfully translated policy into practice with respect to the following questions: How can children be transitioned successfully from native language to English? When are students ready to be transitioned from the native language or ESL instructional program to standard English programs?

This research answers these questions by clearly manifesting that the organizational and administrative structure translated into policy is not the key determinant for successfully integrating children into the English mainstream. What is key is how the organizational and administrative structures across programs permit the inclusion of teaching strategies that are critical for the development of children's functional English language skills. The emphasis is thus on teaching strategies and a language skill sequence (entry-exit checklist) rather than on instructional programs. It is these teaching strategies, not the organizational program, that

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determines the success of transitioned students. Therefore, a continuous instructional flow based on equitable teaching strategies needs to be established between native language, ESL, and standard English classrooms. Since all native language programs are ultimately concerned with transitioning children to English, it is more instructionally as well as financially expedient to unify skill instruction with an entry-exit language checklist. This allows teachers to build on language skills from program to program and from grade to grade.

Currently, the transitional process is extremely fragmented; programs differ from class to class and school to school. Skills taught in all programs do not follow any definite sequence. Teachers do not coordinate instructional goals but maintain an exclusivity with regard to their program affiliation. Programs are considered as separate entities rather than as integrated parts of an educational system. Native language programs are considered distinct from ESL and standard English programs, yet children from native language programs attend ESL classes and are eventually transitioned into standard English programs. What is needed, then, is to largely eliminate titles of programs which cause them to be thought of in theory and practice as separate entities with differing goals. An emphasis should instead be placed on a continuous chain of instruction. Rather than labeling classes as "native language," "bilingual," "ESL," or "standard English" - as separate programs - all these programs should be grouped under the term "language transitioning." In this framework, native language teachers would work in collaboration with ESL and standard English

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teachers to develop language skills in both languages along a language skill continuum. Educators and policy makers would find the elimination of specific titles extremely cost-efficient. In this way, monies for educational programs would not be divided, causing increased administrative expense. An integration of educational programs is also educationally expedient in that it does not cause a duplication of efforts currently seen in transitional programming. Rather, teachers would be working together to provide language development for limited- and non-English-speakers on an ongoing basis.

It appears that one of the factors that may have limited the success of bilingual education is its exclusivity. Ultimately, bilingual programs are judged according to how well children succeed in school after they enter the English mainstream. While bilingual education, including native language instruction, is crucial for the education of LES and NES students, the success of these programs is directly related to how they are integrated into the total educational system. Bilingual programs must give children the skills necessary to compete with English-speaking peers. Policy makers can contribute to the success of bilingual programs by establishing goals that are complementary rather than opposed to those of standard English programs. By addressing the issues of <u>how</u> transition is to be accomplished through attention to continuous instructional strategies across programs and <u>when</u> through an entry-exit checklist, the smooth transitioning and the ultimate student success in the mainstream can be accomplished.

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APPENDIX

ENTRY-EXIT CHECKLIST*

*Not included for reasons of copyright.

M.I.T. Bilingual Teacher Inservice
Research Project
220 Longfellow Hall
Appian Way
Cambridge, MA 02138

MEMORANDUM

TO: Project Participants

FROM: Linda Ventriglia & Stuart Land

DATE: March 27, 1981

RE: Entry/Exit Language Skills Checklist

In our effort to develop a national model for bilingual teacher inservice programs we need to articulate what our expectations are concerning language skills at each grade level. Which language skills should children have already mastered before coming to your class? Which ones will you introduce, maintain, or expect them to master?

This Entry/Exit Language Skills Checklist will focus on how and when children use language to:

1. ask questions
2. seek more information
3. create stories
4. state new ideas
5. develop higher order thinking
6. develop social expressions
7. describe feelings and emotions
8. and more

On the following pages list the Entry/Exit skills for your grade level in each of the Language Arts areas: Oral Language, Reading and Written Language.

ME _____ SCHOOL _____ GRADE _____

OGRAM ( )BILINGUAL ( ) STANDARD

ease list the language skills you feel are important in the following areas:

ORAL LANGUAGE

nguage skills	Skills Development	
	Entry	Exit

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nguage Skills	Skills Development	
	Entry	Exit

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Entry	Exit

CAMBRIDGE PUBLIC SCHOOL DEPARTMENT

WILLIAM C. LANNON
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March 6, 1981

Dr. Linda Ventriglia
Educational Collaborative
for Greater Boston
220 Longfellow Hall
Appian Way
Cambridge, MA 02138

Dear Dr. Ventriglia:

The N.I.E. Research Project which has taken place during this school year at the Harrington School has proven to be very helpful in the observation of teaching strategies that result in effective student transition in Bilingual Education. We in the Cambridge School Department agree with the original premise of this project that the training of teachers in this model will have far reaching effects within the Cambridge Public Schools and eventually in other school systems.

The fact that the N.I.E. Project has brought together the teachers in monolingual and bilingual classrooms in a close working relationship has enabled the teachers to recognize each others concerns and to come to an understanding of each others problems. This recognition has benefited greatly the children in the Harrington School.

The goals of this Project will provide the resources to integrate programs in English as a Second Language, standard curriculum, and bilingual programs.

Sincerely,

William C. Lannon
Superintendent of Schools

Francis X. Foley
Master, Harrington School

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DEFINITIONS OF LANGUAGE METHODS

Bridging - the process whereby children tie words to concepts which are known in the first language. Symbols, pictures, actions for perception, and their word-labeling are used as a means to build extensive vocabularies.

Chunking - the strategy in which children imitate phrases from the second language. This allows children to repeat phrases holistically and enables them to stretch their ability to communicate in social situations and to learn language patterns.

Creating - the final state of language learning, in which children combine words and chunks of language creatively to express their ideas. Original sayings derived from previously learned chunks of language are the end result of this strategy.

Listening In and Sounding Out - a process used by second-language learners to develop receptive and expressive proficiency. Meaning is learned naturally, by the listening action of the learner.

Follow the Phrase - the strategy employed to utilize chunks of language in order to learn the syntax of the second language. Constant patterns and phrases are practiced by the learner and are eventually varied by changing words that follow the phrase.

Socializing - the process by which children learn social expressions holistically, as chunks. Once the social formulas have been learned, they can be applied and practiced in other similar situations.

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meaning is derived by the communicative interaction within the student's own immediate social environment.

Peer Prompting - the process enabling children to learn the second language through modeling and feedback. The language learner is encouraged to experiment with the new language by imitating and repeating utterances by peers.

Copycatting - the learning device through affective, selective, individual, creative, and social imitation in role play. Verbal and nonverbal patterns, selected behavior and actions, individual and creative elaborations, and socially accepted expressions are demonstrated in a natural context.

Putting It Together - the strategy which bridges cognitive, motivational, and social predispositions into various styles of second-language learning. Children choose different approaches to integrate their language learning experience. The language learning styles described in this strategy are:

Reading - meaning of individual words or semantics is emphasized.

Braiding - internalizing language on the level of language patterns or chunks is emphasized.

Orchestrating - listening comprehension and accurate reproduction of sounds is emphasized.

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